

CHILTON'S

MOTOR AGE

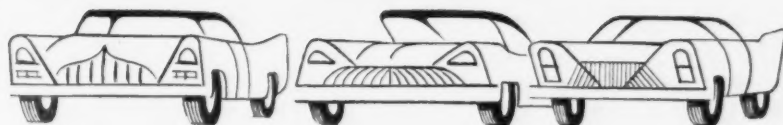
December, 1958

59

ways to service

'59

cars



MERRY CHRISTMAS



Let me tell you about Perfect Circle's Doctor of Motors Clinic

I'm pretty proud of that plaque you see over my shoulder. You see, I've attended three Doctor of Motor Clinics and each time I've learned something new.

At the last clinic our instructor showed slides on the use of PC Power Service products to sustain engine efficiency. The time before it was on how coolant in cylinders causes scuffing. Following these films the instructor brought us up-to-date on things of current interest to our group. The session ended with a showing of that famous annual Perfect

Circle Indianapolis 500 Mile Race film—now the film also has some exciting shots of Daytona Speed Weeks.

But best of all is what followed the formal meeting. Some of us sat around and gassed about engines and things until after one in the morning.

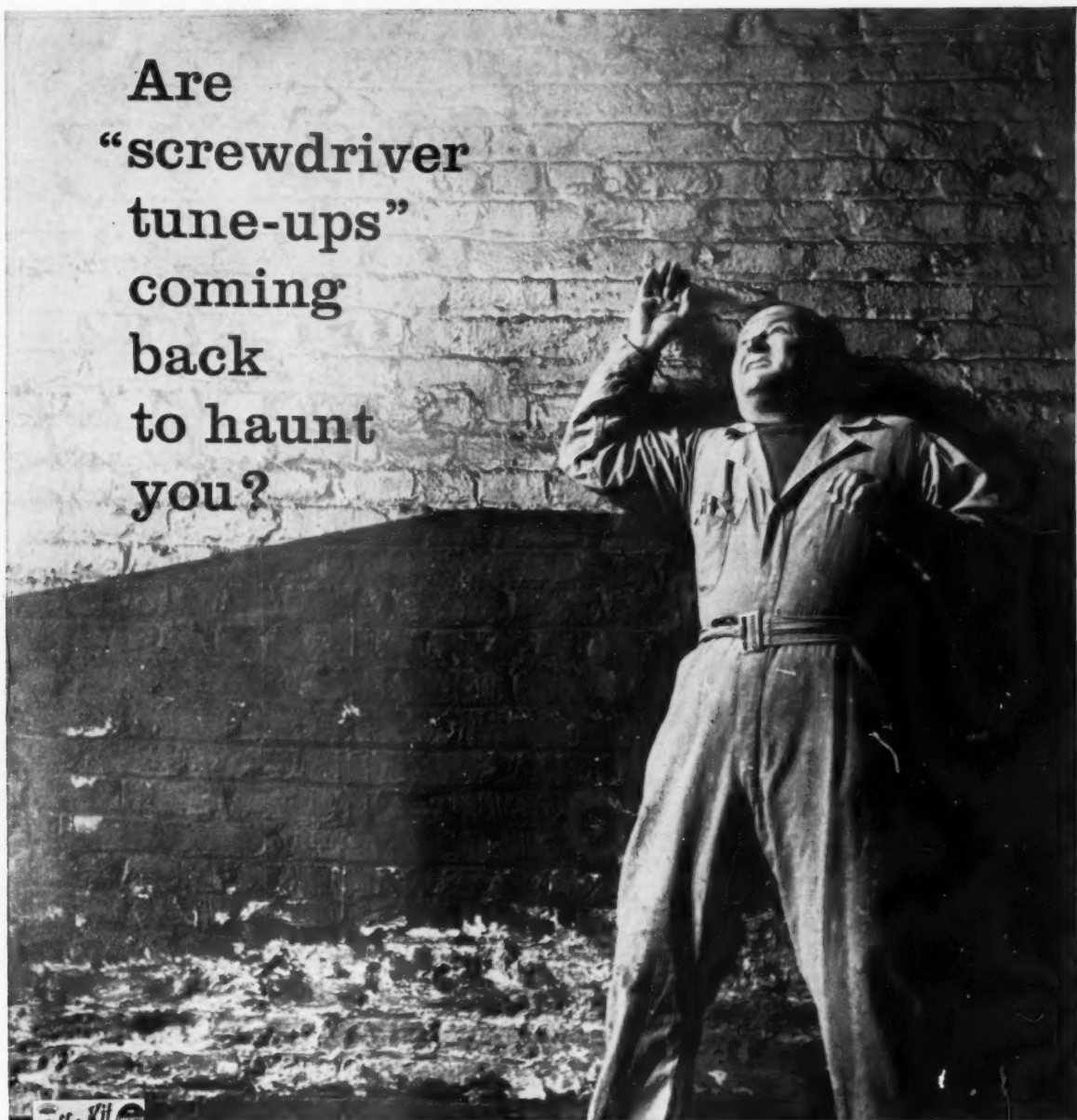
If you possibly can, go to the next clinic in your area. It's great. Any auto mechanic can attend and they're held anywhere PC rings are sold—and that's practically everywhere!

PERFECT  **CIRCLE**

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 to haunt
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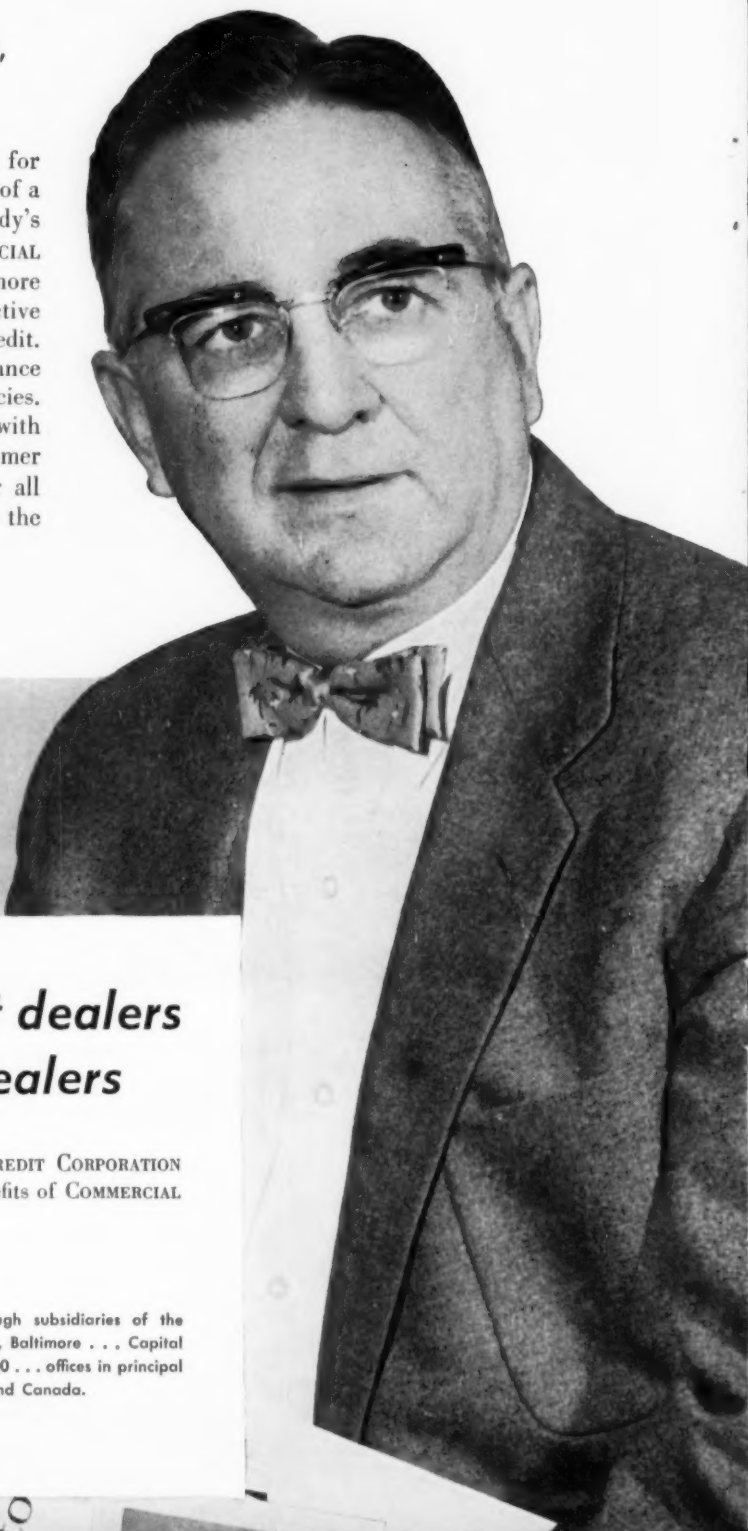


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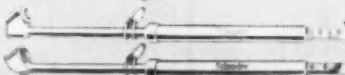
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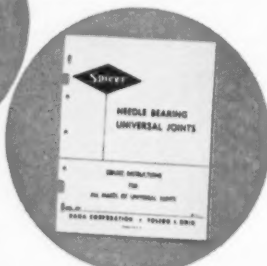
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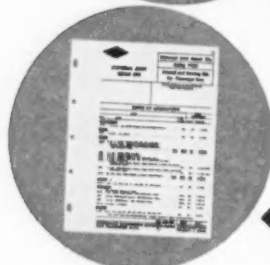
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See Page 53

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Chilton's MOTOR AGE, DECEMBER, 1953

CHILTON'S MOTOR AGE

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DECEMBER, 1958

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IN THIS ISSUE

NEWS

Motor Age Memo	7
Sports Page	15
Newscoop	17
Human Events	36

ARTICLES

How Testing Equipment Builds Tune-up Volume	21
59 Ways to Service '59 Cars	23
Specialist Builds Automatic Transmission Volume	26
Know the Law	28
Highlights of the New Foreign Cars	29
Instruments Don't Guess (Part II)	32
Correct Diagnosis of Customer's Problems	34
Motor Age Clinic—Readers' Clearing House	38
New Device for Frame Straightening	40
What a Repair Bill!	41
Tow Truck Vital to Volume	43
Annual Index of MOTOR AGE Articles & Features	45

DEPARTMENTS

Body Shop Tips	42
Service Suggestions	44
Merchandising Calendar	48
New Products	50
Automotive Service League & New Product Information Postcards	53
New Literature	54
1959 Tune-up—Alignment Specifications	55
1958 New Passenger Car Registrations by Makes by States	56
Wearin' of the Grin	57
Price, Weight, and Body Table	63
Shop Kinks	68
Calendar of Coming Events	82
Advertisers' Index	84
Last Laff	86



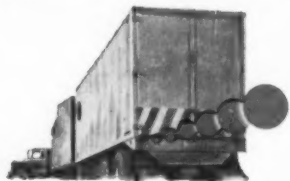
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HEAVY DUTY FLASHER

... FOR
*10,000,000 trucks plus**

The new Tung-Sol Heavy Duty Flasher has a service-rated life of *twice* that of any other type. It can be used to flash one to six lights without a perceptible change in the flashing rate. It provides for instantaneous four-lamp emergency warning and it will replace 95% of the flashers now in use. This new flasher will provide more positive action and greater dependability in any service for which the vehicle is presently wired. Made in the universal form, it can be used in either a plug-in or screw terminal installation.



Get the full story and sales aids from your Tung-Sol representative. Announcement to your fleet accounts will produce immediate volume sales. Electroswitch Division, Tung-Sol Electric Inc., Newark 4, New Jersey.



*Plus boat and car trailers, buses, taxicabs and even passenger cars.

6 and 12-Volt Types

6-Volt—#535 flashes from one to six 21cp lamps

12-Volt—#534 flashes from one to six 21cp or 32cp lamps



ts TUNG-SOL® — *First in Flashers*



MOTOR AGE MEMO

"World's Greatest Show of Automotive Ideas"

THAT'S the flash that comes from Chicago. It refers to the International Automotive Service Industries Show which will happen February 18—21, 1959 at Navy Pier, Chicago, Ill.

Now, this International ASI Show is, generally speaking, for manufacturers, representatives and automotive wholesalers. It's a tremendous show . . . the widest and most comprehensive view of what this service industry represents. But, the vast majority of Motor Age readers won't attend!

We're going to bring the show to you. And, before it happens! The January ASIdeas will preview the show in almost every detail. The new equipment, the parts and accessories, the tools and supplies that you will be using and selling next year will be "on display" and "ready for inspection" in your January issue of Motor Age.

What's more, we're planning a lot of new and extra-special features which will make the January issue more valuable to you and every reader of Motor Age who is ambitious to make 1959 a prosperous New Year. That's our wish for you.

A Quotable Quote

The newly appointed U. S. Secretary of Commerce made this encouraging statement after his first staff conference:

"The system of free competitive enterprise is both a provider of jobs and a producer of

goods. It touches the lives of all of us and its success is more vital to every American today than it has ever been. We in the Department are united in our resolve to help the Administration and the Congress maintain an environment in which American business will continue to thrive."

There Goes St. Christopher

In a church bulletin, published for parishioners of St. Anne's church, near Pittsburgh, the congregation was reminded that the "church has a beautiful blessing for automobiles."

However, the bulletin added, "Even with this blessing, we are tempted to believe that St. Christopher jumps out of the car when you go over 50 miles per hour."

Some Pertinent Facts

According to AMA, 68 per cent of all people employed in the U. S. drive to work in an automobile.

Almost three out of every four new cars sold were for replacement of the 4,250,000 used cars scrapped last year. In addition, 625,000 trucks and buses were scrapped in the same period.

Faithfully yours,

Frank P. Hughes



This Sport Coupe is one of a full series of elegant Impalas for '59

*Here . . . and ready to roll up
another big year for Chevrolet dealers!*

'59 CHEVROLET



What America wants, America gets in a Chevy!

It's shaped to the new American taste with a lean, clean silhouette, crisp new contours, beautifully restrained accents. It brings you more spaciousness and comfort with a new Body by Fisher. It has a bright new sheen—a new kind of finish that keeps its luster without waxing for up to three years. New bigger brakes. Vast new areas of visibility. New Hi-Thrift 6. New handling ease and road steadiness. It's new right down to the tires!

Never before has an automobile manufacturer made such sweeping changes two years in a row.

The 1959 Chevrolet is shaped to the new American taste. It's designed to anticipate the trend toward greater roominess and comfort. Engineered for greater safety and economy. And there are vast new areas of visibility, including a Vista-Panoramic windshield that curves overhead.

Chevy's newness goes down deep, too. A new steering ratio makes handling easier. New suspension

engineering gives a more stable ride. (Level Air suspension* is now even smoother!) There's a sweet new edition of Turboglide*. A new Hi-Thrift 6 that goes and goes on a gallon. Vim-packed V8's. New Safety-Master brakes. And with all that's new, this car still has the economy and practicality that make it unmistakably a Chevrolet. It's all new all over again—in a way that promises to bring Chevrolet dealers sales leadership all over again. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

**Optional at extra cost.*

ALL NEW ALL OVER AGAIN !

YOUR STAR SALESMAN

The man whose voice has been heard by more people than any voice in history—a celebrated adventurer and newscaster, Lowell Thomas is sponsored for you on radio and TV by Delco Batteries. His radio newscast, which goes on the air 52 weeks a year over the whole CBS network, attracts 2,000,000 listeners every evening.* His popular CBS television series, "High Adventure with Lowell Thomas," draws more than 30,000,000 viewers.* What does this mean to you? Just this—more people know Delco because of Lowell Thomas. And since Delco has the strongest advertising in the battery business, it makes sense to have Delco Dry Charge batteries available for your customers when they ask for Delco by name. Easy to stock because it's always factory-fresh, backed by a General Motors warranty, Delco is by far the No. 1 battery preference in America. And best of all, it's easier to sell because you have a "star" salesman working for you—Lowell Thomas.

Delco batteries are also advertised in leading national magazines like Life, Look, Post and Reader's Digest.

*A. C. Nielsen Co.

**GENERAL MOTORS LEADS THE WAY...
STARTING WITH DELCO BATTERIES**



quality built by Delco-Remy
distributed nationally through





SELLING SLANTS

MONEY-MAKING FACTS

"WATCH" FOR THIS BIG, NEW AC FUEL PUMP

**Here's all you do to get
the FM-42-FP package**



- Order any 8 new AC Fuel Pumps of your choice, include an additional \$17.40 for the FM-42-FP Package.

The FM-42-FP Package Contains:

- The Belforte "Ice Cube" Watch Bracelet
- Two AC Fuel Pumps (#4460, Chevrolet, 1955-57) worth \$17.40
- When you've sold the two AC Pumps, you recover \$17.40. Your profit from the sale of the pumps pays for the Promotion Package.

For the FM-45-RFP Package

- Order any 8 rebuilt AC Fuel Pumps of your choice, include an additional \$19.00 for the FM-45-RFP Promotional Package.

The FM-45-RFP Package Contains:

- The Belforte "Ice Cube" Watch Bracelet
- Two Rebuilt AC Fuel Pumps (#24460 for Chevrolet, 1955-57; #29294 for Oldsmobile, 1949-54) worth \$15.25.
- When you've sold the two AC rebuilt pumps, you recover \$15.25. The two fuel pumps which you replace have an exchange value of \$3.75 (\$1.25 for #24460; \$2.50 for #29294). The profit from the sale of the two rebuilt fuel pumps plus their exchange value pays for the Promotional Package.

Watch Walt Disney Studios' ZORRO Every Week on ABC-TV

AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

OF THE MONTH !

FOR DEALERS

PROMOTION

Featuring the Exclusive "Ice Cube" Watch Bracelet by Belforte

Christmas is fast approaching and here's the ideal solution to that perennial problem of what to give *her*.

And here's more good news . . . it doesn't make any difference whether you order new AC Fuel Pumps or Rebuilt Pumps, the Belforte Watch Promotion Package can be yours with the purchase of either the FM-42-FP, New or FM-45-RFP, Rebuilt!

Ask For Them by Number



The Striking "Ice Cube" Watch Bracelet by Belforte, a subsidiary of Benrus Watch Company

This smart, fashion accessory doubles as a beautiful timepiece that will thrill the lady in your life . . . for a lifetime. The Belforte "Ice Cube" contains a fine, jeweled, lifetime movement with an unbreakable mainspring. A transparent back exposes the precise Swiss movement and shows it in constant movement. Each watch bracelet comes handsomely gift-packed especially for *her*.

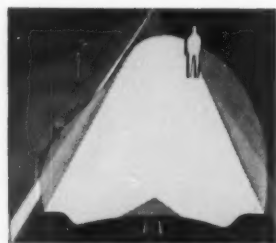


CALL YOUR **AC** SUPPLIER

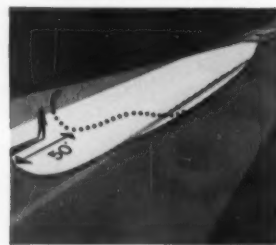
announcing new

Guide T-3 Powerbeam 50

two-headlamp system
replacement headlamp



Improved Light Pattern for
Better Light Distribution



Fifty Feet of Added Light
on Lower Beam

The Guide T-3 Powerbeam 50 Brings Dual-Lamp-System Advantages to Owners of Two-Headlamp Cars! Here's the greatest lamp advancement for single-lamp systems since the famous Guide T-3 headlamp development which made mechanical safety aiming possible. Now you have a single-lamp replacement unit with full 50-watt power on both upper and lower beams!

Tremendous Advantages From New Guide Lower-Beam Filament. There's a smoother beam, better spread for better over-all illumination and freedom from spot-bounce. More comfortable seeing results from this even distribution as against "spottiness."

The New Powerbeam 50 Gives Additional 50 Feet of Light—Aimed Right! The great new Guide T-3 Powerbeam 50 Headlamp concentrates lower-beam throw in so clean a right-road-edge pattern that you see at least 50 feet further than with earlier types. There's actually 25% more light properly and safely directed. There's the same amount of lower-beam light as on the most modern dual-system lamps.

The New Powerbeam 50 Headlamps Can Be Aimed Day or Night. Like all Guide T-3 Headlamps, these can be quickly aimed without even turning on the lamps. The aiming pads of each lamp are precision ground for simple mechanical adjustment so that the upper and lower beams bring maximum benefits to the driver and to oncoming traffic. A more advanced fluting design in the lens gives more efficient light both upper and lower beam. The upper beam is centered higher and points ideally straight ahead. Since the light does not "tunnel" or "spot," vision is more natural and comfortable.

Your Market is Tremendous. There are millions of cars in the two-headlamp system category . . . many of them your customers. They need this Guide improvement. They are driven by people who want the extra safety and comfort. Get the extra business. Do this extra service for your customers.

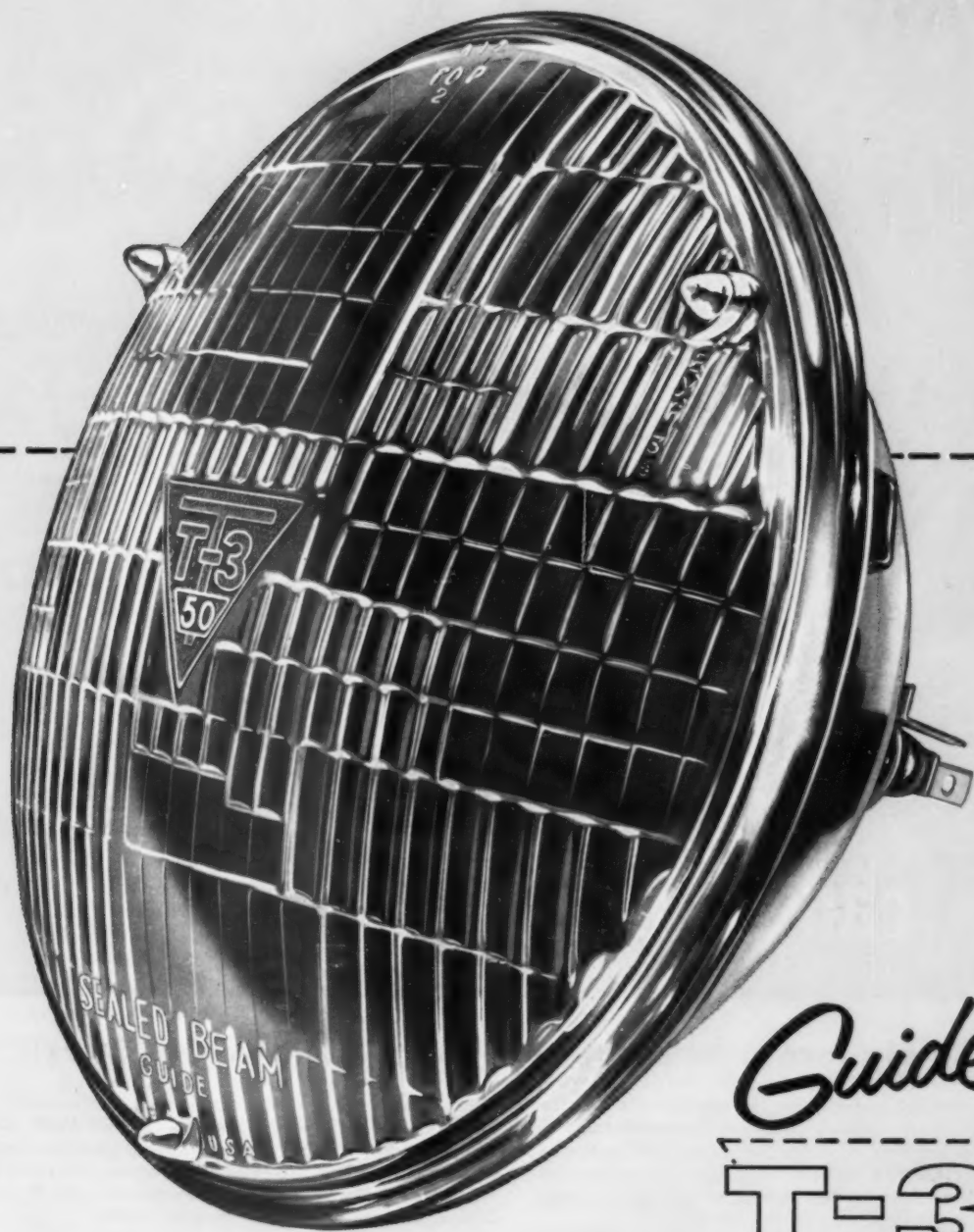
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FROM YOUR



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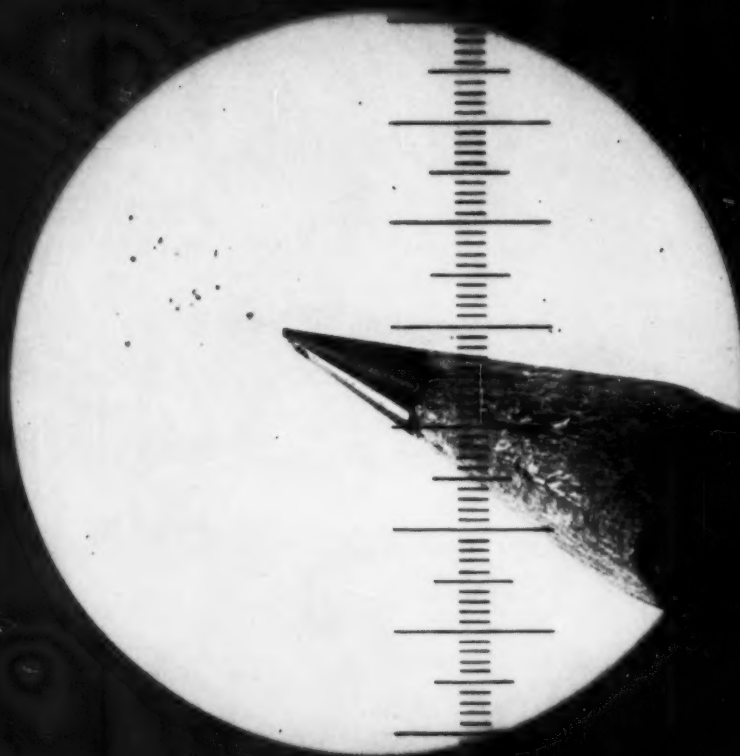
AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

Mechanically Aimable!



Guide
T-3
50
HEADLAMPS

specks the size of a micron



can shorten engine life

...a big fact to help you sell MoPar Micronic Oil Filters!

Waste and abrasive particles far too small to see with the naked eye can have a deadly effect on engine performance. That's the problem that led to the development of the MoPar Micronic Oil Filter. It actually eliminates these particles from the oil system, to the incredible size of a micron (.000039 of an inch).

- This means that the MoPar filter catches over $\frac{1}{3}$ more dirt per square inch than ordinary filters.
- It gives greatly increased filtering speed because the filter surface is over 8 times that of conventional types—571 inches against 69.
- And MoPar offers far greater capacity; 3 to 5 times the capacity of a waste-type filter of corresponding size. And there's no unloading, warping or distorting.

Satisfy your customers with top engine performance and longer engine life. This is a filter you can sell! MoPar means official, authentic Chrysler Corporation parts and accessories, made to highest precision standards. For quick service, call your MoPar wholesaler salesman or your Plymouth, Dodge, De Soto, Chrysler or Imperial dealer.



MoPar Division, Chrysler Motors Corporation, Detroit 31, Michigan

SPORTS PAGE

Rules Committee

A GENTLEMAN in Summit, N. J., name of Robert L. Talbot, sends along a copy of a suggestion which he, writing as spokesman of a group of fans, has submitted to Bert Bell, Commissioner of the National Football League. From here it looks like a sound proposal calculated to reinforce and intensify the suspense element in some games and curdle the peptic juices of the coaches, each of these being a consummation devoutly to be wish'd.

While there appears to be little immediate danger of Bertram de Benneville Bell, George Halas, Tim Mara and other priests of the professional lamasery being hunted down and burned at the stake as dangerous radicals, they are a pretty heretical crew compared with the college football mob, a lot of image-breakers and idol-smashers. Consequently it is no surprise to learn that Mr. Talbot has "received a very courteous reply from Commissioner Bell stating that the suggested rule change has been discussed quite a few times and that he would bring it up again this year at the annual meeting."

Mr. Talbot and his friends have a plan that they feel would help sustain interest throughout a game, even in the late stages when one team has drawn ahead by a margin which, under today's rules, the other team could scarcely hope to close. They feel the present rules contribute to the hopelessness of pursuit by requiring the team that has just scored to kick off to the team scored against.

Even if a team is trailing by 30 to 13 improves its score by seven points, it must yield possession immediately (or take the long chance of recovering a short kick-off). The receiving team has the agreeable option of trying to pile up the score or just protect



VIEWS OF SPORT
By Red Smith

its ten-point margin by running out the clock. In either case, spectator interest flags unless there is a fumble or interception.

Seven Points for Possession

Mr. Talbot suggests: "Whenever a team is behind by more than seven points it should be entitled to receive the kick-off regardless of which team has scored. In the above example, the team that has been behind, 30 to 13, makes the score 30 to 20. This team still trails by more than seven points and so is entitled to receive the next kick-off.

"Another touchdown would make the score 30 to 27. With only a three-point difference, present rules would apply and the team scored against could elect to receive. We believe this would sustain interest at a higher pitch right up to the end."

As Bert Bell's reply indicates, this idea is not brand-new. It is, as a matter of fact, only a logical extension of the rule which gives the team scored against the privilege of receiving the next kick-off. That was meant to equalize opportunity, offering the team that has just been hurt a chance to strike back. Trouble is, one chance to strike back isn't much help when you need two or three chances.

(Continued on page 72)



Strengthen your "Economy Pitch" with Sunoco Custom-Blending!

No more complaints about engine knock or gasoline costs!

Here's a gasoline idea that's like money from home for every new car dealer.

When you sell a new car, recommend Sunoco's new Custom-Blending. This gasoline system was designed to keep car-owners happy. Sunoco Custom-Blending offers motorists six different blends of gasoline... six different octane strengths... and six different prices... to accurately fit any car you sell with the exact octane it needs.

Here's what it means to you, pure and simple:

If the car you sell calls for "regular" but comes back with knock, recommend changing to Blue Sunoco '200'—a high test gasoline higher in octane than most "regulars"—yet selling at "regular" price. If he still needs slightly more octane, the

Sunoco dealer can step him up one or two grades... without forcing him to pay the big jump to "premium" priced gasoline.

If your cars call for "premium", only Sunoco Custom-Blending can fit each and every one with the exact octane it needs. In many cases the exact blend a car owner needs will cost less than ordinary premiums.

That means these motorists can save as much as 4¢ a gallon over other premiums and still enjoy the lively stepping power and quick getaway that was built into the car.

It's a bright new idea in gasoline... a boon to the new car dealer. Study the system... see how it can help you on the showroom floor!

CUSTOM-BLENDED

BLUE SUNOCO

BLEND SELECTOR

200 210 220 230 240 260

Custom-Blended

\$1.80
TOTAL SALE

8.88
GALLONS

OIL (OPTIONAL)

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mister

jobber executive

MOTOR AGE: JOBBER EXECUTIVE EDITION

Battery Cable Terminals Not Taxable

BATTERY CABLE TERMINALS, designed for use on varying sizes and types of storage batteries, are not subject to the manufacturer's excise tax on automotive parts and accessories....Internal Revenue Service says such terminals, of two-piece slip-yoke construction, escape the tax because they will fit batteries and cables designed for uses other than autos.... Key is that they are not primarily designed for auto use (Revenue Ruling 58-489).

How Will Congress Influence Business?

GAINS IN CONGRESS BY DEMOCRATS may affect business both well and badly....Possible favorable results include more votes for help to small business....Aid to areas of high joblessness....Increased public works, military money in circulation.

On debit side, Congress may add to labor union power....Extend minimum wage law coverage....Boost inflation by unnecessary spending.

Taxpayer Business Expenses To Be Watched

TAX OFFICIALS IN WASHINGTON will keep up their close watch on taxpayer business expenses....True, line 6A is gone from the 1958 individual income tax form....That's the line where business expenses were to have been listed.

But a note of caution comes from Fred Scribner, Treasury Under Secretary: Government may toughen its tax rules if expense account abuses continue.

AWDA Elects New Officers

ELEVENTH ANNUAL CONVENTION of Automotive Warehouse Distributors Assn. was held in Kansas City Nov. 2....Thomas S. Perry, prominent Atlanta, Ga., warehouse distributor, was elected president of the Assn.

Other officers elected were: Ernest A. Tapp, Jobbers Supply Co., Kansas City, Mo., first vice president; Robert S. Weber, P. E. Weber, Inc., Milwaukee, Wis., second vice president; Bernard Bock, Bobro Products, New York City, secretary; Paul Livoni, Crum & Lynn, Inc., Los Angeles, Calif., treasurer.

Gates Builds Factory in Mexico

GATES RUBBER COMPANY OF DENVER will construct a half-million-dollar rubber products plant in Mexico....Factory will produce variety of rubber products....Including complete line of V-belts for automotive and industrial markets in Mexico....Production scheduled to start July 1, 1959.

Factory will contain 27,200 sq. ft. of manufacturing, storage and office space....It will be built on seven acres of land in City of Toluca, 40 miles west of Mexico City.

OPERATION

JOBBER

Your Machine Shop is a very valuable asset—promote it!

THERE has been a constant controversy during the last ten years over the necessity for automotive wholesalers to operate machine shops. Today a large majority of jobbers still have shops of one kind or another. There are still plenty of opportunities for those concerns who have carefully studied the market potentials. Who have looked into the specific shop services needed by fleets, dealers, garages, specialty brake shops and other outlets.

Machine shops also help increase parts sales. For this reason alone, many jobbers would hesitate a long time before closing their shops and permitting their customers to gravitate to competitors who have offered shop services. Many jobbers claim that they lose money on their shops, but make up the losses on increased parts sales. The latter, fortunately have carried a good gross profit margin for many years.

Promote Your Shop

If a jobber has a shop, then the first thing to do is to promote the host of services rendered in the shop. If the machine shop is not promoted by the shop men themselves, by the jobber, by the counter men and by the outside salesmen, then there is little hope for the shop's survival.

There are many acceptable ways to promote, advertise and merchandise machine shop services. Here are just a few of the proven ways:

1. Customer and prospect visitation of the machine shop. There is no better way to stimulate interest and increase shop sales.

2. Mailing a series of postcards or bulletins outlining the various kinds of shop services available such as: valve jobs; engine rebuilding; brake work; crankshaft grinding; cylinder head resurfacing; crack repairing;

small engine repairs for power mowers, outboard motors, other small engines; pin fitting; equipment repair work; special electrical jobs.

3. Promotion of the shop by counter men.

4. Promotion of machine shop services by outside salesmen.

5. Distribution of a printed card on which all the shop services are listed along with a price for each service. Many wholesalers include both the dealer cost and selling price to the consumer so that the dealer can quickly figure his profit on every job.

6. A special program of personal calls, telephone calls and direct mail follow-up to leading fleets.

Fleets Are Best Customers

Studies over many years clearly indicate that fleet operators are the best customers and prospects for the many exclusive services rendered by those jobbers who have machine shops. Any machine shop promotional campaign must, therefore, include advertising and merchandising to fleet operators. Other major outlets, of course, which should not be overlooked are: independent garages; service stations; farm implement dealers; vehicle dealers; and industrial concerns.

In those areas where the Federal highway expansion program has or will soon get under way, the market for machine shop services is bound to increase. There will be hundreds of thousands of on-and-off the road equipment that will need heavy repairs. These can be performed by those jobbers who have machine shops. Many jobbers are now working on special selling programs directed specifically at this new market. This market will increase in importance in the next few years. Don't overlook it!!!

*signs
of the
times . . .*



Top executives of Monroe Auto Equipment Co. express their support of the "Power of advertising" theme used at the company's recent annual sales meeting in Monroe, Mich. From left to right at table seated are: B. D. McIntyre, president; William D. McIntyre, executive vice president and general manager; C. S. McIntyre, executive vice president and general sales manager; and J. E. Bickel, vice president in charge of Merchandising.



Arrow Armatures Co. of Boston, Mass., and of Spartanburg, S. C., opened its Spartanburg plant to teachers of the area recently in a Business-Industry-Education Day. Albert S. Holzwasser, Arrow president (4th from left) welcomed the teachers and presided over the general program.

Monroe Meetings Stress Ad Power

Usually relegated to the tail-end of a sales meeting after days of sessions on products, service products, manufacturing, credit, selling techniques, and trips through the plant, advertising was the keynote of the four-day annual sales meetings of the Monroe Auto Equipment Co. Meetings were held in Monroe, Mich.

The firm's top management and merchandising division launched the recent meetings on a theme of "Power." The entire first day of the meeting was devoted to the "Power of Advertising."

"Our company recognizes that marketing is the major problem of most industries today," commented B. D. McIntyre, Monroe president in explaining this shift of emphasis. "We must develop greater sales power if we are to find markets for the increased output of our accelerated production facilities and methods."

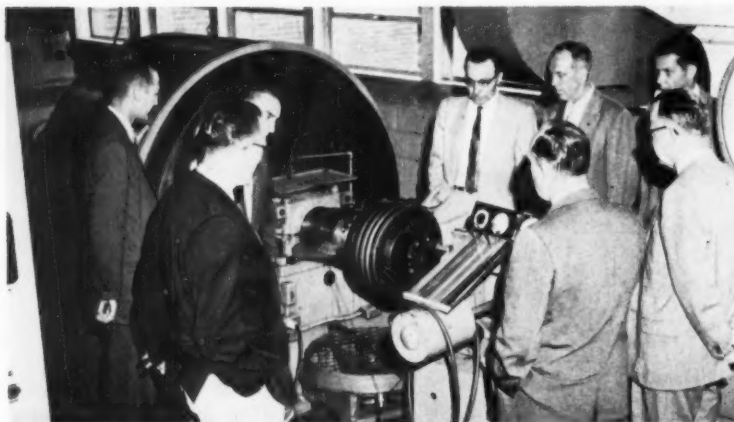
"We recognize advertising as the most economical method of getting the stories of our products to the trade and to car owners who buy our products."

Named President

D. Nevin Smith, Vice President of The Electric Storage Battery Company, will again serve as President of The Association of American Battery Manufacturers, Inc. Reelected at the annual meeting in Chicago late in October, Mr. Smith will direct the affairs of this association which consists of executives of nearly 200 battery manufacturers and marketers.



Pictured after elections held by members of the California Automotive Wholesalers' Association at their annual convention in Monterey are: top row (l. to r.): Robert Cloney, Earl Crawford, A. Jas. Ayers, Joseph Erman, A. Glen Gaffney, Wallace Glycer. Second row (l. to r.): Thos. Sutton, Robert Wright, Judson Holland, Leslie Wyre. Third row (l. to r.): S. B. Sturtevant, Eugene Asher, Leonard Gibson, James Shattuck, George Graveline, Clifford West. Bottom row (l. to r.): James Hamilton, P. Ted Johnston, A. E. Zimmerman, Kenneth Hickman, Fred Duttweiler, Rollin McBurney. Other Directors (not shown) are: Dewey Dunn, Al Eddings, Roy Gurthridge, William Walter, George Wanger, and Robert Wootten.



A two weeks' course was recently concluded at the Bendix South Bend plant as part of the firm's long-sponsored Factory Training Program. Attending were a group of Central Distributor Educational Directors, who, in turn, will train their own Service Distributors upon returning to their home states and areas. Reading clockwise, left to right, are: Harold Fuegner, Borbein-Young & Co., St. Louis, Mo.; John Burell, Birmingham Electric Battery Co., Birmingham, Ala.; Jack Butler, Chain Battery & Automotive Supply Inc., Shreveport, La.; Arnold Nelson, Cleveland Ignition Co., Cleveland, Ohio; Lyle Maunder, Bendix Eclipse of Canada; Wesley Selbo, Frank Edwards Co., Burlingame, Calif.; John MacKenzie, Harvey Sales & Service Co., Boston, Mass.; and Ross Sivers, Sunset Electric Co., Spokane, Wash.

NSPA Releases Special Manual

National Standard Parts Association has published another of its series of management manuals. New manual is called "Automotive Repair Shop and Service Station Management Guide." The 88-page manual contains over 135 illustrations. It was initiated as a project in 1954 by the Association's Marketing Research Committee. The Committee decided on the manual after a study was made which revealed the need for a comprehensive service level management guide.

The special project, aimed at helping automotive servicemen, revealed that increased competition makes it necessary that the automotive service man study the latest management techniques as specifically applied to his business.

Although especially designed for the assistance and education of independent automotive repair shops, service station operators, fleets and vehicle dealers, the Guide serves as a valuable aid for all segments of the industry.

DeVilbiss Holds Paint Sessions

A field school attended by 39 automotive jobbers from the Columbus, Ohio, area was conducted recently. It was held by factory instructors in spray painting from the DeVilbiss Company.

Dave Perry, jobber sales manager, Roger Whitell, regional sales manager, and Ralph French, area sales representative, also participated in the school.

Ben Asch Dies

Ben M. Asch, eighty-two, founder and Chairman of the Board of AAR passed away at his home in Freeport, L. I., New York on Friday, November 21.

Ben served as the Automotive Affiliated Representatives' first President for five years—1934 through 1938. He was Secretary from 1942 to 1948 at which time he was elected Chairman of the Board, the office he held up to the time of his death.



Pictured above is Fred Person of Irwin, Pa. who was first prize winner in the "Prestone" anti-freeze baseball contest. Person received a check for \$1,000 from National Carbon Co., division of Union Carbide Corp., makers of "Prestone" and sponsors of the nation-wide contest.



James Cope (above) was recently elected president of Selvage & Lee, Inc., public relations firm with offices in New York, Chicago, and Washington. Cope was a former vice president of Chrysler Corp.



Pictured at a recent board of directors meeting of the Automotive Wholesalers of Tennessee are standing, left to right: A. D. Moody, Harry Maxwell, Carl Shults, Glyn Bounds, John Duke, Keith Broyles, R. H. Chilton, Jr. Seated, also left to right, are P. R. Cochran, A. M. Downing, J. M. Nelson (president), Russell Johnson, T. E. Long, H. A. Richardson, Robbins Mitchell.

MEWA Releases New Profit Guide

Motor and Equipment Wholesalers Association has announced release of its 1958 edition of its popular profit manual. The manual is called "New Management Approach to Planning for More Profits" Guide.

Introduced Last Year

According to B. W. Ruark, general manager of MEWA, the Guide was first introduced last year. Reception proved highly gratifying. "Letters from practically all marketing sectors of the country," he said, "have lauded the Booklet as an incentive method."

Ruark added that the manual enables the wholesaler to plan and determine his fair profit beforehand. This is done basically by a six-step formula.

This profit formula is described and worked out in chart form. It is built around the following theme: "Estimated sales volume *minus* a fair rate of profit *equals* permissible expenses."

Colorado Group Holds Meeting

Over 50 Wholesalers and 25 Boosters attended the fall meeting of the Colorado Automotive Wholesalers held in the American Legion Hall, Denver, Colorado, recently.

John Reynolds, Sales Manager of Straus Frank Company and President of N. S. P. A. was among the speakers.



John Munhall III, (above) Washington, D.C., District Director of Public Relations for U. S. Steel, has been awarded a 25 year service pin by Roger M. Blough, chairman of the board of U. S. Steel Corporation.

Industry Meetings

Jan. 17-25—1959 Chicago Automobile Show, International Amphitheatre.

Feb. 2-4—Automotive Accessories Manufacturers of America exposition, New York Coliseum, New York City.

Feb. 15—Automotive Booster Clubs International executive counsel meeting, Conrad Hilton Hotel, Chicago.

Feb. 15-17—National Standard Parts Assn. National Convention, Hotel Sherman, Chicago.

Feb. 15-17—Motor and Equipment Wholesalers Assn. National Convention, Conrad Hilton Hotel, Chicago, Ill.

Feb. 16—Automotive Booster Clubs International board of governors meeting, Conrad Hilton Hotel, Chicago.

Feb. 17—Automotive Affiliated Representatives board of directors and membership meeting, Pick-Congress Hotel, Chicago.

Feb. 18—Automotive Booster Clubs International banquet, Conrad Hilton Hotel, Chicago.

Feb. 18-21—International Automotive Service Industries Show, Navy Pier, Chicago.

Feb. 26-27—American Petroleum Institute, Div. of Marketing, Lubrication Committee meeting, Sheraton-Cadillac Hotel, Detroit.

Feb. 27-March 8—1959 World Wide Auto Show, Miami Beach Exhibition Hall, Miami Beach, Florida.

March 12-15—Pacific Automotive Show, San Francisco Civic Auditorium, San Francisco.

May 3-8—Top Management Institute, Motor and Equipment Wholesalers Assn. Allerton House, University of Illinois, Monticello, Ill.

May 4-6—American Petroleum Institute, Div. of Marketing, Lubrication Committee meeting, San Marcos Hotel, Chandler, Ariz.

May 17-20—Automotive Engine Rebuilders Assn. Convention, Royal York Hotel, Toronto, Ontario.

May 27-29—American Petroleum Institute, Div. of Marketing, midyear meeting, The Savery, Des Moines.

Cavanaugh Retires

L. R. Cavanaugh, traffic manager of Wolf's Head Oil Refining Co., has retired from active service after 39 years with the firm. Announcement was made by A. W. Scott, president of Wolf's Head.

R. C. Kean succeeds Mr. Cavanaugh as traffic manager. A veteran of 23 years with the company, Mr. Kean was previously in charge of the Order Dept.



Six star salesmen from the Lone Star State arrive in Chicago to paint the town as guests of the Martin-Senour paint company. The Texans set sales records for Martin-Senour automotive finishes during recent Texas promotion. Flown to Chicago, they were greeted at the airport by a band and TV starlet Carmelita Gibbs (in cow-girl outfit.)

N. T. D. R. A. Names Martin President

Ernest B. Martin, Martin Tire Co., Jacksonville, Fla., is the newly elected president of the National Tire Dealers and Retreaders Association. He was elected during the 38th annual convention of the association. Mr. Martin will serve for a one-year term.

Officers also elected for a one-year term include K. R. Schaal, first vice president; J. S. Morrison, 2nd vice president; and Leslie Wilkinson, 3rd vice president.

Law Crackdown On Shoplifting

Legislation to aid merchants stamp out expensive losses from shoplifting will be introduced in Congress next year. Measure will specifically apply to Washington, D.C. it is reported. But it will be designed as a "model" law which other states or cities could adopt.

APRA to Convene In New Orleans

New Orleans, the "Paris of America," will play host to the Automotive Parts Rebuilders Association's 12th annual convention and trade show on October 28-30, 1959. The Hotel Roosevelt, located very close to the city's famous French Quarter, has been chosen as convention headquarters.

The 1959 convention will boast a "new look" for proposed business meetings says APRA. The convention will be devoted entirely to general management subjects. Technical discussions relative to the individual segments of the industry will be held in clinics at different intervals throughout the year. These will be under the auspices of the newly-organized Institutes.

This year's industrial trade show exhibits will be conveniently located in one large exhibit hall. Other programs will be arranged to stress the importance of exhibit visitation.

Brake Clinics

More than 175 Pennsylvania and New York state brake specialists attended three clinics recently. Clinics were conducted by Bill Sanders and Tom Morgan, district sales managers for the Grizzly Brake Division of MarPro, Inc.

The meetings, attended by service station and garage operators, were held at the Don Urban Supply Company, New York; the C. J. Palmer Company in Syracuse; and at Stine's Brake Service in York, Pennsylvania. The Grizzly Brake clinics dealt mainly with the profit potential in brake servicing and installation.

NLGI Completes Annual Elections

Officers and directors for the forthcoming year were elected at the National Lubricating Grease Institute's 26th annual meeting. Place was Chicago at The Edgewater Beach Hotel.

F. E. Rosenstiehl, the Texas company, was elected to the presidency. H. A. Mayor, Jr., Southwest Grease and Oil, is vice president. Dr. J. V. Starr, Esso Standard Oil, is Secretary and A. J. Daniel, Battenfeld Grease and Oil is treasurer.

Elected to the board of directors of NLGI were Mayor, S. C. M. Ambler of British American Oil; T. W. Binford of D-A Lubricants; E. W. Campbell of Gulf Oil; R. Cubicciotti of L. Sonneborn Sons; A. G. Griswold of Cities Service; F. R. Hart of Standard Oil (California); C. L. Johnson of Jesco Lubricants; W. A. Magie II of Magie Brothers Oil; A. S. Randak of Sinclair Refining; and T. F. Shaffer of Shell Oil.

NLGI is a technical organization devoted to the lubricating grease and fluid gear lubricants industries. It is international in scope. NLGI's headquarters offices are in Kansas City, Mo.



Car above is "Silent Northern" built in 1905 and purchased in 1908 by Ralph Everhart. Car is reported to have all the original equipment except the tires. Car has two-cylinder engine, reports Mr. Everhart, retired blacksmith and machinist, who recently corresponded with Johns Manville firm reporting that the car is still equipped with J-M brake linings.

Automotive Wholesalers' Sales and Inventories

Data from Bureau of the Census, Department of Commerce

Region	Per Cent Change					
	Sales			Inventories		
	Sept. 1958 from Sept. 1957	Sept. 1958 from Aug. 1958	9 Mos. 1958 from 9 Mos. 1957	Sept. 1958 from Sept. 1957	Sept. 1958 from Aug. 1958	
	Sept. 1957	Aug. 1958	9 Mos. 1957	Sept. 1957	Aug. 1958	
New England.....	+ 5	+ 7	- 1	+ 2	+ 3	
Middle Atlantic.....	+ 6	+12	+ 4	- 5	- 1	
East North Central.....	- 1	- 1	- 4	- 2	+ 1	
West North Central.....	+ 9	+ 7	+ 6	+ 7	- 2	
South Atlantic.....	+ 6	- 1	+ 1	+ 2	+ 2	
East South Central.....	+18	- 1	+ 5	...	+ 2	
West South Central.....	+ 8	- 5	0	+ 2	+ 1	
Mountain.....	...	+ 4	...	+ 4	- 3	
Pacific.....	+11	+ 1	+ 2	- 6	+ 1	
United States.....	+ 4	+ 3	+ 6	+ 2	0	

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units).....	331,817	179,585	420,377	+ 84.8	-21.1
Industrial—F. R. B. 1947-'49=100 (Adj.)..	137	136	144	+ 0.7	- 4.9
SALES					
New Cars.....	330,000	321,106	463,795	+ 2.8	-28.8
Replacement Tires (Units).....	6,364,613	6,678,519	5,901,827	- 4.7	+ 7.8
Manufacturers (\$ Millions)					
Durable Goods.....	\$12,561	\$12,385	\$14,132	+ 1.4	-11.1
Non-durable Goods.....	\$14,078	\$14,003	\$14,083	+ 0.5	None
Department Stores, 1947-'49=100.....	138	147	136	- 6.1	+ 1.5
GENERAL					
Consumers' Price Index, 1947-'49=100....	123.7	123.7	121.1	None	+ 2.1
Civilian Employment.....	65,306,000	64,629,000	66,005,000	+ 1.0	- 1.1
Unemployment.....	3,806,000	4,111,000	2,508,000	- 7.5	+51.7

Motor Age's Who's Who



Robert K. Ru-land has been appointed vice president and manager of Original Equipment Sales for the Walker Manufacturing Company of Wisconsin. At the time of his appointment he was manager of Commercial Sales.

Martin J. Caserio has been appointed general manager of the Delco Radio Division of General Motors. He succeeds **Berry W. Cooper**, who is being transferred to a special assignment pending his retirement effective January 1, 1959.



C. Gregg Geiger has been promoted to the position of general sales manager, Johns-Manville Dutch Brand Division. He was named merchandise manager of the division in July, 1950.

Alan W. Lott and **Robert B. Kiersky** have been named directors of the Permatex Company, Inc. Lott is executive vice president of the company and Kiersky is director of military sales for Coca-Cola Co.



George K. Tusher has been appointed director of export sales for The James C. Heintz Company of Cleveland, Ohio. He has been associated with export sales and service of retreading equipment since 1946 and active in general export sales since 1939.

S. William Riley, formerly chief project engineer, has been appointed chief engineer for the Quaker Rubber Division, H. K. Porter Company, Inc.

A. D. Bobrow has been appointed director of Automotive Sales with full charge of the sales and distribution of the NEMCO line of auto antennas for Van Norman Industries, Inc.



M. S. Griffin, left, has been named staff director of Advertising for Thompson Products Divisions of Thompson Ramo Wooldridge Inc., succeeding **Fred R. Witt**, who retired after 36 years of service with the company.

J. Marvin Larkin has joined Micro-Lube Sales as advertising manager. He joined the company in the summer of 1958 as a sales and advertising representative.



New promotions within the sales department of the Lubricating Equipment Division of The Aro Equipment Corporation are as follows: **C. A. Stutzman**, left, sales manager, has been transferred to Aro Equipment of California. **Hal F. Freyer**, right, formerly in charge of the New York Branch has been promoted to general sales manager at Aro's main office in Bryan. **John J. LeVan** has been promoted to manager of the New York Branch.

William S. Mahoney has been elected president of the Ramsey Corporation, a wholly-owned subsidiary of Thompson Products, Inc. He was vice president and general manager of Ramsey since 1956.



The Rochester Products Division of General Motors has added seven men to its field service engineer force. The new engineers and their headquarters cities are: **Nelson W. Seeber, Jr.**, Houston; **William M. Hobbs**, Los Angeles; **Hugo J. Schreiber**, Cleveland; **Louis A. McNinch**, St. Louis; **Francis A. Hughson**, Washington, D. C.; **Harry T. McNinch**, Minneapolis; and **Lawrence W. Jones**, Chicago.

Lawrence W. Fischer has been appointed an executive sales engineer on the Automotive General Sales staff of the Bendix Products Division, Bendix Aviation Corporation at South Bend, Indiana.



Charles L. Goodwill has been named Western Regional Service Manager for The Dayton Rubber Company's Tire Division.

Albert W. DeChard has been named sales manager of Auburn Spark Plug Co., Inc., Auburn, New York.

Earl M. Barden has been appointed special Detroit sales engineer for The Electric Auto-Lite Company. He will extend the engineering and sales service of Auto-Lite's General Products to Detroit area manufacturers.



MOTOR AGE

newscoop

Foreign Car Sales
Lower Cars in 1960
Dealer Profit Picture
Exhaust Gas Research
Aid for Small Firms
Higher Gasoline Tax?
Report on Simca

In the days ahead.... HERE'S WHAT TO LOOK FOR!!!

Adjustments In Replacement Parts Price

YOU CAN EXPECT FURTHER ADJUSTMENTS in replacement parts prices next year.... Car companies and independent parts manufacturers giving market closer look.... Studying certain "inequities" that exist in parts pricing structures.... Price boosts expected to be significant on some lines, notably sheet metal parts.... Expect some downward adjustments in others.

Foreign Car Sales Vs American Car Sales

SALES OF IMPORTED CARS hit record in September.... Took more than 11 per cent of total U.S. market that month.

Impressive figure not as significant as it may seem.... Most U.S. makers experienced their worst month in September.... Result of plant shutdowns and changeovers to 1959 model production.... Car sales in September tallied at 317,000 compared with 490,000 in like 1957 month.

Checker Motors Corp. To Produce Car

LONG-DELAYED PASSENGER CAR produced by Checker Motors Corp. will go on sale mid-January.... Called Superba, car resembles Checker's taxicabs.... Differs in mechanical features.... Price, excluding optional equipment, about \$2300.

Chicago Auto Show Starts January 17

FIFTY-FIRST CHICAGO AUTOMOBILE SHOW gets under way for a nine-day run January 17 at International Amphitheater.... Sponsored by Chicago Automobile Trade Assn.... \$20 million show once again will present Detroit's newest products.

Record 500,000 sq. ft. of space will be used to show off some 450 U.S. passenger cars and trucks and import cars.... Colorful stage show will be presented daily to help attract visitors and prospects.... Detroit hopes show will help provide needed sales stimulus for coming year.

Reversal Of A Trend

IF YOU THINK 1959 CARS ARE LOW, wait until you see 1960 models.... At least one make will go down an inch or so.... However, industry apparently has reached end of road on lengths and widths, according to some stylists.

In 1960 models you'll see a reversal of the trend toward longer and wider cars.... Lengths won't be chopped overnight.... It'll be a gradual process.

New Door Designs Being Worked On

STYLISTS EXPERIMENTING WITH new door designs.... Would permit easier entry into low slung cars.... One idea under consideration: doors that curve into roof panel, such as now found on Cadillac's limousine models First of such designs may appear on sedan models within a year or two.

Such doors, however, present problems on hardtops.... There is no upper door frame to support any structure above beltline.... One solution in hardtop styling would be "flippers".... Part of the roof would open vertically and simultaneously as the door is opened.

All New Body Cycles Expected Every Two Years

AUTO INDUSTRY HAS SEEN END of three-year body cycles.... Auto makers may eventually offer new bodies every year, according to S. L. Terry, Director-Corporate Planning Office, Chrysler Corp.

Terry noted that all-new body cycles are now to be expected at least every two years.... Precedent has been set for dropping an all-new body for another all-new body after only one year.... Chevrolet has come out with a completely new car two years in succession.

Automotive Retail Sales Climb

AUTOMOTIVE RETAIL SALES THIS YEAR expected to approximate \$50 billion, according to Automobile Manufacturers Assn.... Total will be third or fourth best on record.... Compares with all-time high of more than \$53 billion during 1957.

Of the total, motor vehicle dealers will take about \$31 billion.... Service stations \$14.7 billion.... Parts and accessories outlets about \$2.3 billion.... Sales of automotive replacement parts and accessories, at wholesale, are expected to be ahead of last year.... Somewhere around \$2.10 billion compared with \$2.04 billion in 1957.

How Many Dealers Operated At Profit?

FIFTY-EIGHT PER CENT OF FRANCHISED new car dealers operated at a profit from January through September.... Combined average for all dealers was a .1 per cent loss, however.... Loss amounts to \$6 per new unit sold, the NADA reveals.

One bright factor was reduction of dealers' new car stocks.... Average per dealer dropped from 17.1 on June 30 to 8 on Sept. 30.

Air Pollution Poses Big Problem

NEW LEGISLATION TO EXTEND fight against polluted air promised by Sen. Kuchel, R., Calif.... Present law providing for smog studies due to expire mid-1960.

Sen. Kuchel concerned about amount of auto exhaust gases in city air.... Unless some new way is found to control gases, he suggests, cars and other vehicles may have to be steered away from city centers.

Research On Auto Exhaust Gases Showing Results

AUTO INDUSTRY SEES HOPEFUL PROSPECTS for solving problems created by fumes.... After spending \$5 million in five years on research projects.

Situation reported by Harry A. Williams, managing director of AMA, to National Conference on Air Pollution.... Conferees met in Washington late in November.

More Americans On European Roads

AMERICANS DRIVING ON EUROPEAN ROADS will number 200,000 in 1959, AAA predicts.... Number might go higher if big upswing occurs in jet-aircraft travel to Europe.

Many touring motorists will buy European cars at long range before going abroad.... They will pay for cars here, claim them in Europe, drive them there, and bring them to U.S. later.

Help For Small Firms

BIG JOB FOR CONGRESS OUTLINED to Automobile Dealers Assn. of Alabama.... Sen. Sparkman, D., Ala., told group Congress must promote well-being of more than 4 million small firms.

To do this, he asserts, Congress must enact laws to enable small firms to compete on equal terms with larger ones.... Sen. Sparkman is chairman, Senate Small Business Committee.

Government Wants to Study Prices

GOVERNMENT WILL ASK CONGRESS for more money to study prices.... Keeping track of retail, wholesale prices and spot-checking key commodities costs about \$7.5 million a year.... And cost is rising.

Commissioner Clague, Bureau of Labor Statistics, says more money would mean a better job by his price-trackers.... He hasn't named the amount of extra money he wants next year.

How to Eliminate Traffic Jams

YOUR CITY CAN TRIM DOWN THOSE business-killing traffic jams.... A U. S. Chamber of Commerce booklet suggests some remedies. City can use a 50-foot street for one-way traffic, ban parking on it, and move up to 2,200 cars an hour.... Traffic signals can be timed to keep up steady traffic flow. Booklet is "How To Get the Most Out of Our Streets".... Chamber sells it at \$1 per copy.

Progress Report On The Simca

HOW'S LATEST SMALL CAR ENTRY, the Simca doing? Sales in first nine months of year were more than triple those during same 1957 period.... September's record sales of 1779 Simca units brought total nine-month U.S. sales to more than 12,000 cars.... Compared with approximately 4000 in like 1957 period.... Chrysler expects some 700 dealers to be handling Simca line by end of this year.

Ford Helping Dealers Tell Price Story

FORD SPARING NO EFFORTS in helping its dealers tell price story on its 1959 models.... It is supplying dealers with both retail and wholesale price lists of competitive makes.

Idea of furnishing dealers with both price lists had been considered by car companies in the past.... But was always dropped for fear of retaliation by the other.... Wholesale price list will help Ford dealers determine how far down they can go in event of price war.

Higher Gasoline Tax Threatened

THREAT OF HIGHER FEDERAL GASOLINE TAX draws closer.... Purpose would be to raise federal highway money.... Eisenhower Administration nears decision on whether to ask a boost of 1¢ to 2¢ a gallon.

Some members of Congress may come up with different plan to raise funds.... They may urge sale of special certificates, backed by an agency Congress would set up.

Critical Congress Looks At Auto Industry

ALL SIGNS POINT TO SEVERE NAGGING of auto industry by Congress in 1959.... Danger signal has been raised.... It's the recent Senate subcommittee report inviting Justice Dept. to look into "monopoly aspects" of industry.

Sen. Dirksen, R., Ill., a subcommittee member, is not impressed by contents of the report.... Disagreeing with majority views, he finds them critical of industry because it is successful and has good earnings.

Enforcement Of Auto Price-Label Law Lax

FEDERAL AGENCIES MUST BE VIGOROUS in enforcing new auto price-label law, NADA insists.... Law requires car sticker listing factory's suggested price and other information.... Enforcement has been lax, dealers charge.

NADA stresses that Congress passed law to benefit public.... Dealers intend to insure that buyers get "full benefit" from it.

Nation on Wheels

TRAVELERS IN THE U. S. are chalking up more than 200 million trips a year by car.... When they go 500 miles or more, they use autos on 69 per cent of their trips.... It's these medium-long to long trips that produce most calls for service.



How testing equipment **BUILDS Tune-up VOLUME**

Perfect tune-ups are assured when testing equipment is used

WITHOUT modern testing equipment a shop might "accidentally" tune one out of every ten cars correctly. So says Andy Anderson, service shop owner in El Paso, Tex. Andy's operation has been singled out to receive Motor Age's "Shop of the Month" award.

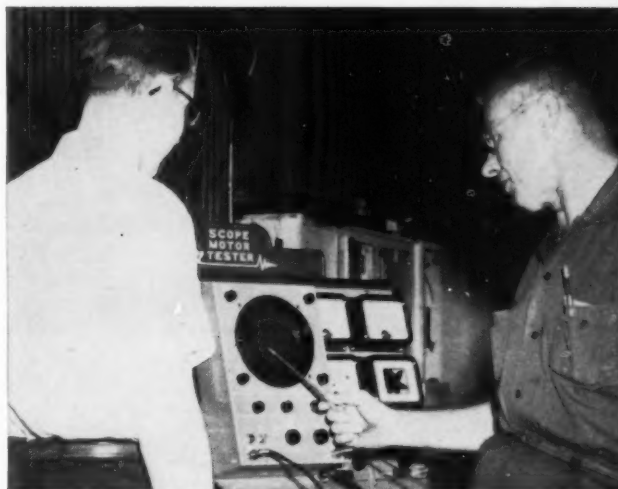
Anderson invested some \$3,000 in 4 pieces of new testing equipment not too long ago. His purpose: To be in a position to turn out the type of jobs today's motorists believe they are paying for.

"I didn't buy this new testing equipment to sit around as props," maintains Anderson.

Before purchasing this new equipment, Anderson talked it over with his 4 full time line mechanics. Would they take it upon themselves to take the time to learn how to master this equipment?

"Do you boys know that no car can be tuned to the owner's satisfaction unless it meets the manufacturer's specifications? And do you appreciate that we can not meet these specifications without the proper testing equipment?"

Fortunately, Anderson has a crew of reliable and serious minded mechanics. They want to turn out every job that is beyond



Andy Anderson explains the "scope" to a customer who came in for a major tune-up.

reproach. They were not only willing, but eager for Anderson to buy this necessary equipment to work with.

The factory man spent two full days teaching them how to use and operate the equipment. Instead of taking mock-up jobs,

(Continued on next page)

Tune-up Volume continued from previous page

Anderson's Garage has floor space to accommodate 9 cars plus one over the aligning pit.

Mechanic explaining to another mechanic how he used the new equipment to diagnose the trouble on his tune-up.



with the method used to diagnose and locate trouble, ordered up a major tune-up.

Motorists Want Perfection

Anderson will tell you that today's motorists want their car put in perfect condition. And that they don't mind paying for it. The gripe comes when they order up a job . . . and don't get what they expected.

"This new testing equipment," Andy went on, "wasn't bought to build up the customer's bill. On the contrary, it will save him money."

Truthfully it takes time to learn to use this equipment for all it's worth. And here the mechanics helped one another. That is, one mechanic using the equipment on a certain job would figure out the routine; then he would call one or more other mechanics from a "no-hurry" job over to see how this problem was being handled. Helping one another cut down the time spent in learning how to operate the equipment.

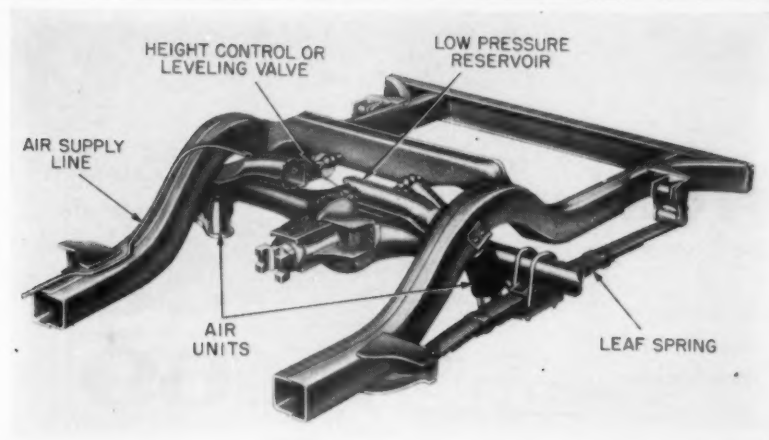
"The customers," Anderson concluded, "rate the job by the car's road performance. We might sell a customer on how good we were with words, and land the job. But it

(Continued on page 74)

actual customer cars were used . . . Often the customer looking on.

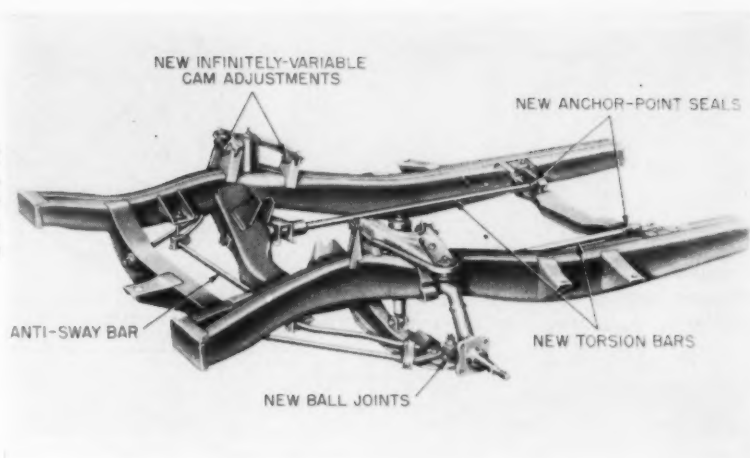
One of the first jobs was a stickler. The customer reported that something was wrong with his car . . . while another shop had professed to fix it, the trouble seemed to be there still.

The scope quickly located the area of the trouble. In five minutes the trouble was located . . . The distributor points were practically welded together. By locating the trouble so quickly, the customer, impressed



59
ways to service
'59
cars 

Above is shown an exploded view of the new air suspension used on Dodge. At right is view of the new Dodge front-end. Note the location of the cam adjusters.



59 Ways to Service '59 Cars

Latest servicing techniques for the '59 cars are presented in this instructive series of articles

SERVICE techniques on the '59 cars are presented here. More will follow each month. This information should prove of valuable assistance to you and your staff when servicing the new models.

Infinite variable cam adjustment is provided for adjusting the front end camber & caster. These cams will provide the necessary movement to make exact settings.


The cams are located at the frame attach-

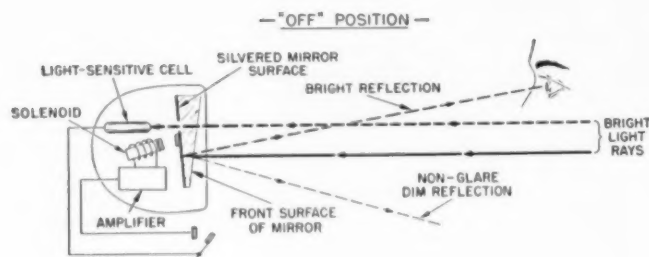
ing points of the upper control arms. The cam adjustment can move the end of the control arm either toward or away from the center of the car. If the rear adjustment is left unchanged and the front cam rotated, the front of the upper control arm will pivot horizontally around its rear attaching point. Outward movement of the front of the arm will end up producing a greater caster angle

(Continued on next page)

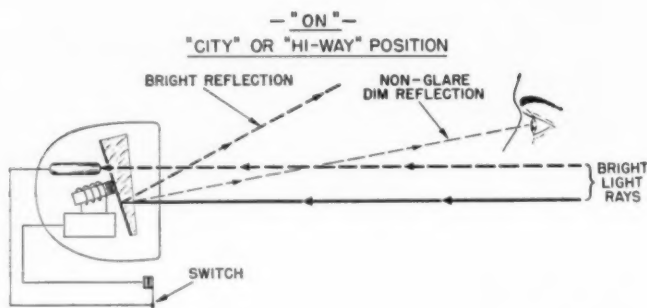
Servicing the '59 Cars . . .

continued from previous page

59
ways to service
'59
cars 



Schematic drawings top and at right show how Dodge automatic rear view mirror operates.



to the rear. At the same time the outward movement of the upper ball joint will increase the camber angle.

Rear Suspension—Level Flite

Level-Flite suspension is different from other types of air suspensions. Air springs are incorporated as a part of the rear suspension. The springs have automatic leveling. The car is always at the same height regardless of the load it is carrying.

The system consists of a compressor, high compressor tank, low pressure reservoir, air spring and a height control or leveling valve.

Plymouth

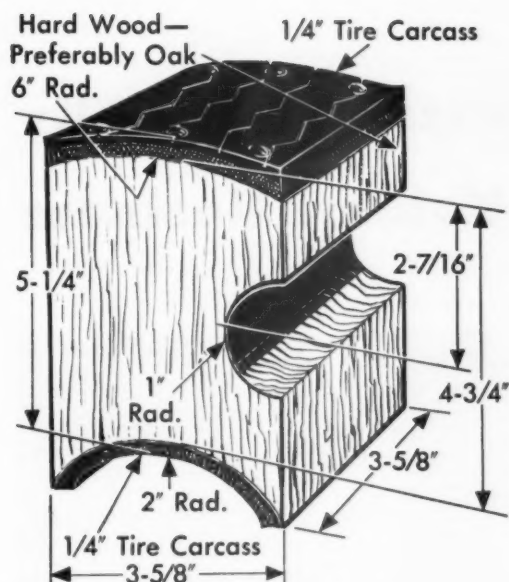
All the new Plymouths have the vehicle number plate in a new location. One plate containing all the information is now located under the hood on the left side of the top cowl panel. The new plate contains information that will prove valuable when ordering parts trim. Also in determining the color of the paint used on the vehicle. The plate

will contain model number, body number, paint coat letters, schedule date, year letter, number of cylinders, body type, body building plant and vehicle number.

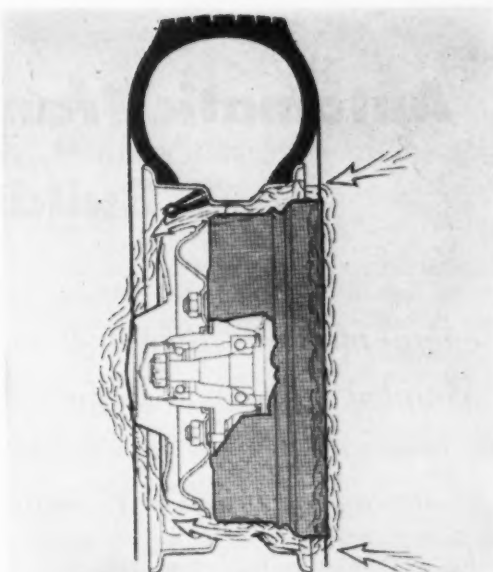
The front suspension system has new mounting brackets for the upper control arms. This simplifies the method of adjusting caster and camber. The brackets are one piece construction welded to the frame. The cams are welded under the head of each mounting and adjusting bolt. A matching removable cam is located over the flat at the threaded end of the bolt. When installed, bolts can be turned to a total of 180 degrees, providing ample caster and camber adjustment.

Cadillac — Towing instructions for cars equipped with air springs.

When towing with the front or rear wheels raised off the ground, shut off the engine and pull out the air lift handle on the instrument panel to lock air in the suspension system. This is done by shutting off the engine before pulling out the air lift handle. The certain



Wooden block should be used when towing new Cadillacs with air suspension.



An exploded view is shown of the '59 Chevrolet's new ventilated brake drum.

amount of rod travel will remain in the suspension system.

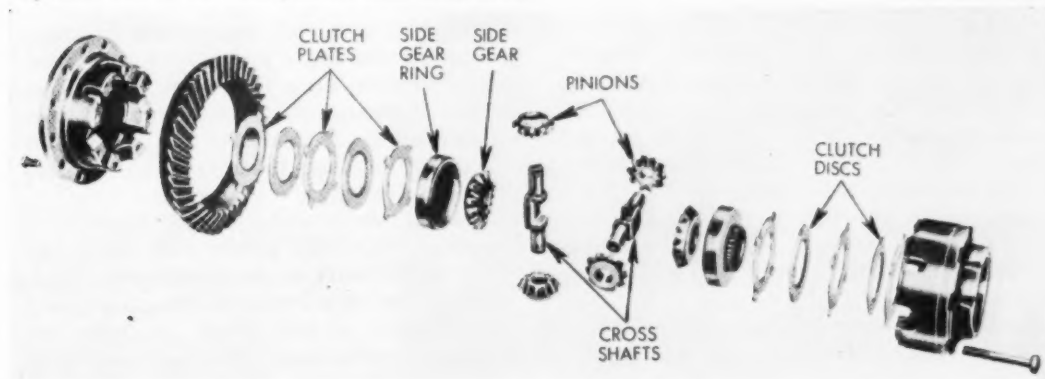
When towing with the front wheels raised off the ground, make certain that there is not less than six inches clearance between the lower edge of the rear bumper and the ground.

When towing with the rear wheels raised off the ground, make certain that there is not less than 6 inches clearance between the front bumper and the ground. Tie the steer-

ing wheel with the front wheels in a straight ahead position. If there is no air in the suspension system do not attempt to tow the car with front or rear wheels raised off the ground unless bars are used to support the suspension system. If the front end is to be towed, raise rear end of car. Install support blocks upright in front of the shock absorbers between the rear axle housing and the frame side members. Lower the rear end.

(Continued on page 60)

Exploded view of the Buick positive-track differential.



Automatic Transmission Specialty Builds Volume Business

General mechanical know-how coupled with some specialty in automotive work has made success of this Texas shop



A colorful billboard displays the automatic transmission specialty of Thompson's garage.

ABOUT a dozen years ago, Ken Thompson moved to San Angelo, Texas, as a total stranger and as a mechanic looking for a job. In a short while he decided to set up his own business. Even though he had no advantage of a local following.

As Thompson himself puts it: "I had to start from scratch, a stranger in a strange land."

He did have one trump card. By playing it skillfully and carefully through the years



Owner Kenneth Thompson repairs an automatic transmission. Overhauls average one a day.

he has built up a thriving, volume business. Thompson decided a specialty was a good means to build up a reputation for garage service in general. He chose automatic transmission work—at about the time automatics were first entering the market in any appreciable number.

Volume rose steadily. Today, Kenneth L. Thompson is sitting pretty with nearly all major repair work on an appointment basis.

"Since we were fortunate enough to build our business to this point, we have enjoyed greater prestige," Thompson declares.



Merchandising Story of the Month

"There's something about scarcity, whether it is a rare piece of merchandise or a good mechanic's time, that makes people want it more. It has worked that way with us."

Naturally Thompson reserves enough time each day to handle emergencies for regular customers.

Thompson learned automatic transmission service early in the game. In turn he has taught the specialty to two of his mechanics. All have gone to various special schools to keep up with current changes and the new automatic transmissions.

The garage does an average of an automatic transmission overhaul job a day. Some days there are three or four in the shop, while three or four days may pass before a job comes in. But Thompson himself and both the transmission mechanics are general mechanics as well. They work on whatever else there may be in the shop when they're not busy on transmissions.

Given the proper mechanical knowledge, it is comparatively easy to set up a special automatic transmission service, Ken points

out. In order to service transmission jobs properly and quickly, he has two automatic transmission jacks, a special bench-on-wheels to use in moving a dismantled unit to a work bench, and about \$300 worth of special hand tools. This latter includes the special tools required for individual makes of cars.

Regardless of the condition of the unit, Thompson's Garage rebuilds it. From the "ground up" if necessary. With new parts, not salvage from other jobs. "The customer has a right to expect the best parts and workmanship available. And we find he is willing to pay for them, once he is assured of getting them."

Thompson encourages customers to watch their cars worked on. There are no barriers anywhere in the garage to discourage this practice.

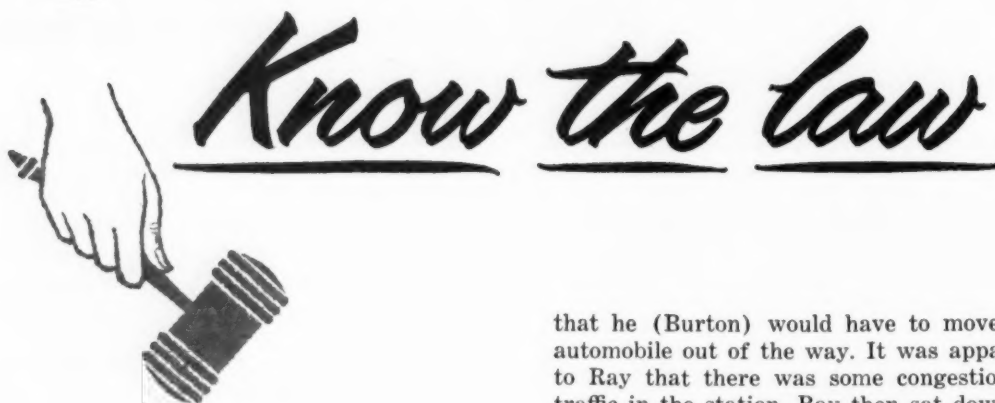
"Naturally some customers get in the way and even may be inclined to tell us how to do the job," Thompson adds though: "This small irritation is immaterial compared to
(Continued on page 77)

Thompson removes a transmission with a special transmission jack, one of his major equipment items.





Management Story of the Month



Editor's note: "Know the Law" is compiled and written for Motor Age by Howard Newcomb Morse, Counsellor at Law. Mr. Morse is a member of the Bar of the United States Supreme Court.

THE topic this month is to look over several cases involving possible liability of the owner of a Service Station for falls by a customer in connection with hoisting devices and hydraulic lifts:

Let's look at the first case. It is the case of Ray vs. Pan-American Petroleum Corporation, decided by the Court of Appeals of Georgia. T. L. Ray drove his automobile into a service station operated by the oil company in Rome, Georgia. Purpose was to have the tires changed and the crank case drained and refilled with oil. He left the car standing near a gasoline pump. After informing Burton (the station manager) as to the service desired, he left for his boarding house about a block away.

He returned to the station in about 30 minutes; found the car standing at the place where he had left it. He observed that the tires had been changed in accordance with his instruction, but did not know whether the crank case had been drained and refilled or not.

He got in the car. He was in the act of sweeping out the dust with a small broom when Burton approached him and stated

that he (Burton) would have to move the automobile out of the way. It was apparent to Ray that there was some congestion of traffic in the station. Ray then sat down on the front seat. Burton got in beside him. Burton drove the automobile a few feet into the troughs of a machine, which Ray afterwards learned was used in hoisting automobiles for the purpose of greasing them and changing their oil. Ray did not know at that time that the automobile was driven upon this machine for the purpose of being hoisted. But believed that Burton placed it there merely to get it out of the way of other customers.

Ray did not pay any particular attention. He did not know that it was the purpose of Burton to raise the automobile by means of such hoisting machine. When it was first driven upon the skids or runway of such machine the automobile was only one foot above the ground. Ray, without notice or knowledge of any intention on the part of Burton to raise the automobile above this level, finished sweeping out the interior. In the meantime, the automobile was hoisted to a height of six feet. But the operation was so smooth and noiseless that Ray did not detect it. When he had finished sweeping, he got out of the car believing that it was only one foot from the pavement. He fell to the pavement and was seriously injured.

Ray argued that the oil company was negligent because its station manager raised the automobile by the hoisting machine without notice or warning to him. The Superior Court of Floyd County, Georgia, granted a

(Continued on page 76)

*First of a review series on
the mechanical, technical &
style highlights of Imports*

HIGHLIGHTS of the new Foreign Cars



HILLMAN MINX

MORE and more small foreign cars are being seen on America's highways these days. Where do they come from? What do they offer the American motorist in gas economy, horsepower and riding comfort?

Motor Age has rounded up these facts on these small car imports so that you will be able to recognize them and know just what makes them tick. On the following pages you will see and read about some of the small car imports from England, France, Sweden and Italy. In subsequent issues more foreign cars will be reviewed.

The new Hillman Minx sedan for 1959, features a larger engine, redesigned front grill and a new color scheme. This British car boasts greater acceleration, higher cruising speeds and elegant interiors.

Engine Is New

The 1390 c.c. engine has been replaced with a new 1494 c.c. power plant, offering greater all-around performance coupled with the fuel economy. The engine has a compression ratio of 8.5 to 1. Maximum power output has been raised to 52.5 b.h.p. at 4,400 r.p.m. The

(Continued on next page)

Foreign Car Review

Continued from preceding page

maximum torque has been increased 76 lb./in. The new Hillman can cruise at 80 m.p.h.

A new rear axle ratio of 4.55:1 on the sedan has increased the cruising speed. Special new body insulation, larger muffler and improved engine mountings have been introduced in '59.

The low lines of the Minx start at the redesigned radiator grill and travel on around the body where the two-tone color division has been lowered. The range of color choice is greatly extended for both the body and matching interior upholstery.

The power plant of the 1959 Hillman Minx series is combined with an increased clutch size (7 $\frac{1}{4}$ " raised to 8"), and the new recirculating ball-type steering for light, precise control. The battery is larger, increasing the capacity from 30 to 38 amp/hr.

AUSTIN A40



The Austin A40, a new member of British Motor Corporation's economy car family has been introduced.

The new model—styled by Pinin Farina, is an innovation in economy car motoring. In the A40, Farina has combined compact clean and uncluttered exterior lines with generous seating and luggage space for four adults.

A unique feature of this new body design is its adaptability for station wagon use in a matter of seconds. This can be done by extending full headroom over the normal luggage compartment and utilizing a rear tailgate door hinged at its bottom edge. When

backs of rear seats are folded, a rubber-lined floor extending from the back of the front seats to the rear panel, makes a cargo space of 18 $\frac{3}{4}$ cubic feet below waistline available.

The power plant of this new Austin is the BMC "A" type 948 c.c., 4 cylinder O.H.V. engine. It develops 38.5 bhp at 5000 rpm and 50 lb. ft. torque at 2000 rpm. Compression ratio is 8.3:1.

Economy and driving ease have been stressed. The A40 delivers better than 40 miles per gallon. It features a 4 speed gearbox with synchromesh on 2nd, 3rd and 4th gears. Light and responsive cam and peg steering is utilized to assure ease of parking and relaxed driving in traffic and on the road. The A40 is capable of a top speed of 70 miles per hour.

VOLVO



The 1959 Volvo, Swedish-built five passenger sports car features larger, one piece windshield with slimmer pillars, wider, deeper rear window, thermometer type speedometer, new steering system and many other improvements.

The dimensions and weight of the Volvo are: Wheelbase 102 $\frac{1}{2}$ inches; overall width 62 $\frac{1}{2}$ inches and height is 60 $\frac{1}{4}$ inches. The weight of the car, including fuel, oil and water is 2,140 lb.

Volvo has a top speed of 95 mph and averages over 30 miles-per-gallon of gasoline. It has a four-cylinder, overhead valve engine with dual carburetors. Bore is 3.125 inch, stroke 3.15 inch, displacement 97 cu. in. and compression ratio is 8.2:1. The car has a balanced crankshaft, lightweight pistons and an improved oil filter system.

Other features of the '59 Volvo are: All welded Swedish steel body, large trunk, coil springs, front and rear. The car has self-centering, hydraulic brakes with automatic adjustment. The tires are tubeless, low pressure. Whitewall tires are standard.

MORETTI



The Moretti cars are products of Turin, Italy. The engine, transmission and rear-end component connections are made of aluminum, brass and bronze. The engine consists of a water cooled 4 cylinder valve in head and overhead cam.

There are five different models in the Moretti line called: The Moretti Coupe Turismo, with the 750 cc engine which has a top speed output of 90 to 92 mph; the Super Panoramica Sedan; the 4 or 5 passenger Station Wagon; the 6 or 7 passenger Station Wagon; and the Gran Turismo Sport Coupe with a 1200 cc engine, top speed exceeding 135 mph. 90 percent of the body component parts are hand made, hand finished and hand assembled.

The Moretti cars have three types of engines. The first engine is a 750 cc class which is the valve in head water cooled overhead cam. The second engine also in the 750 cc class used in the Gran Turismo and competition models, is with 4 cylinders, water cooled, overhead dual cam with two carburetors and twin throats on each carburetor; the 1200 cc engine which goes in the Gran Sport Coupe. The third is also water cooled, overhead twin cam with dual carburetors and twin throats.

DAUPHINE



The Dauphine, made in France by Renault, Inc. has an engine with a compression ratio that has been increased from 7.75 to 8 on the U.S. model.

The Dauphine engine will also be equipped with a depression distributor. The increased compression ratio and the addition of a depression distributor provide a considerable reduction in gasoline consumption for the Dauphine.

The Dauphine is now being supplied in 5 new colors (apart from Black and "Coral" Red): "Capri" Blue, "Dubarry" Blue, "Ireland" Green, "Pompadour" Grey and White.

The upholstery fabric now matches the outside color of the car.

JAGUAR-MARK IX



The Mark IX is Jaguar's newest luxury sedan for the American market. Long, low lines are emphasized by duo-tone body treatment and thin chrome striping. Interior features are leather upholstery, deep-pile carpets, and instrument panel and garnish rails.

New automatic transmission provides a fingertip control enabling a lower gear to be held indefinitely. Other features are sliding sun roof, security locks on rear doors, two glove compartments, four ashtrays, fold-back armrest in rear, additional nylon rug and boudoir clock in rear.

The new Mark IX power plant is a six-cylinder, twin overhead camshaft, twin-carburetor engine of 3.8 litres capacity, as against the 3.5 litres of the Mark VIII. The increase in power, up to 225 h.p., has been developed in order to provide increased torque and improved acceleration in the medium and lower speed ranges. Maximum speed of the Mark IX is approximately 110 miles per hour. The new sedan is equipped with power steering and 4-wheel disc brakes.

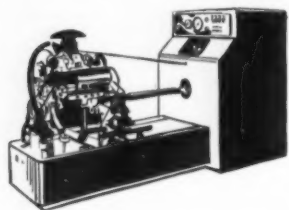


Mechanical Story of the Month

INSTRUMENTS DON'T GUESS

Conclusion of a two-part series of articles dealing with a round-up of various types of test equipment

ENGINE DYNAMOMETER

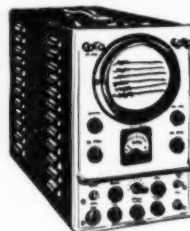


The engine dynamometer permits engine calibration under variable load conditions. Frequently it is used as a run-in stand for rebuilt engines. Breaking in engines under controlled load conditions seats rings, bearings, etc., for greater over-all engine life and better initial oil and fuel consumption. Pre-broken-in engines can be fully utilized immediately when placed in service. Any torque and speed can be applied against the engine when breaking it in under load. Also, power output of the engine can be checked before it is installed in the vehicle.

Mechanics often make a practice of setting up valves on the loose side and ignition timing on the late side so as to aid them in starting a tight engine. After the engine has been run-in on the dynamometer, final adjustments can be made more readily.

Many other engine malfunctions such as oil pressure, oil leaks, and engine knocks can be readily diagnosed on the test stand, and corrections made before the power unit is removed from the dynamometer.

OSCILLOSCOPE



The oscilloscope offers the definite advantage of showing on a screen an actual line picture of ignition firing as it happens. It translates electrical impulse into lines on the face of a TV tube. With it, the mechanic is able to check each cylinder individually or compare all in relation to each other. It gives an over-all picture of the ignition system under actual operating conditions, enables the mechanic to pinpoint troubles.

Some mechanics are inclined to shy away from use of the oscilloscope. They erroneously believe it difficult to interpret and

understand the wave patterns. True a little practice is needed, but, once the mechanic understands the basic pattern, the variations are quickly and accurately interpreted.

Further study is under way to increase the testing and troubleshooting capabilities of the oscilloscope. Various accessories are being made available, and the resulting wave patterns are being studied. For example, work is being carried on in the study of intake and exhaust manifold and valve problems, generator-regulator checking, engine vibration, gear noises, diesel injector timing and similar fields.

ENGINE ANALYZER



Most of the instruments discussed so far can be purchased in a combination unit officially known as an engine analyzer. But more often they are better known by such nicknames as "box brains," "Frankenstein" or "mechanical genius."

Under any name, these instruments are highly valued by the men who use them. Details vary a good bit between the various manufacturers, but most include a minimum of basic electrical instruments, plus exhaust gas analyzer, tachometer, fuel pump tester, etc.

These analyzers are portable, may be rolled from one job to another. Many provide separate removable units, combining related instrument groups such as voltmeter-ammeter, exhaust analyzer, etc. All have the great advantage of providing convenient storage space for most if not all the shop's instruments.

Biggest problem lies in the fact that many of these expensive units gather dust in an unused corner of the shop. Why? Here's an all-too-typical answer: "When we bought the unit, we had a man trained to use it. He is no longer with us, and nobody else has had

enough interest to become familiar with it." This is a most unfortunate situation. But it can be remedied by proper training.

CHASSIS DYNAMOMETER



Queen of all shop instruments is the chassis dynamometer. As a complete indoor proving ground, it offers the mechanic a more precise and faster way of testing, for on the dynamometer there are no road hazards or traffic congestion. "Hills" and loads are precise proportions. The check-out man or trouble-shooter can devote all his attention to the problem itself.

VALVE GAPPER



No tune-up job is complete unless the valve clearance is correct. All guess work is eliminated when the valve gapper is used. The valves can be set exactly to the manufacturers specifications. A quick check on the hydraulic lifters can be made also. Worn cam lobes can be uncovered at the same time.

CORRECT DIAGNOSIS of Customers' Problems

BUILDS

By William M. Montgomery, Associate Editor

Customer Reports

Horn will not operate

*Mechanic
Knows:*

- a. Loose connections in circuit
- b. Defective horn button
- c. Defective horn relay
- d. Defects within horn

Horn has poor tone

*Mechanic
Knows:*

- a. Low voltage at horn
- b. Defects within horn

Horn operates intermittently

*Mechanic
Knows:*

- a. Loose connections in horn relay
- b. Loose connections in horn circuit
- c. Defective horn switch
- d. Defective relay
- e. Defects within horn

Direction signal fails to operate

*Mechanic
Knows:*

- a. Blown fuse
- b. Defective flasher unit
- c. Loose connection in circuit
- d. Failure of direction signal in left or right parking lamp

Indicator lamp flashes extremely fast

*Mechanic
Knows:*

- a. Loose connections in circuit
- b. Failure of parking lamp
- c. Failure of stop lamp

Gasoline gauge shows full under all conditions

*Mechanic
Knows:*

- a. Break in line between tank & instrument panel unit
- b. Defective tank unit
- c. Tank unit

Gasoline gauge shows empty under all conditions

*Mechanic
Knows:*

- a. Lead to tank unit grounded
- b. Defective tank unit
- c. Defective panel unit

CONFIDENCE and Repeat Business

*Mechanics of all ages
will find this series of articles
a helpful guide
in deciding the right steps to take after trouble is reported*



Customer Reports

Gasoline gauge does not register with ignition on

*Mechanic
Knows:*

- a. Break in line between instrument panel unit & ignition switch
- b. Defective panel unit

Speedometer noise and/or indicator oscillating

*Mechanic
Knows:*

- a. Cable dry
- b. Kinked cable
- c. Defective speedometer head
- d. Casing connector loose on speedometer case

Engine cranks normally, but will not start (spark is good)

*Mechanic
Knows:*

- a. Distributor cap
- b. Rotor
- c. Spark plug wires

Engine cranks normally, but will not start (spark is weak)

*Mechanic
Knows:*

- a. Primary circuit
- b. Coil
- c. Coil to distributor high tension lead

Engine misses erratically at all speeds

*Mechanic
Knows:*

- a. Breaker points
- b. Condenser
- c. Secondary wiring
- d. Coil
- e. Spark plugs
- f. High tension leakage across coil

● represents most common solutions

HUMAN EVENTS



England's Aston-Martin DB4 is really fast on starts and stops—is capable of attaining a speed of 140 m.p.h. The DB4 can be accelerated up to 100 m.p.h. and stopped again within less than half a minute, such is the power of its 263 b.h.p. engine and its British-made disc brakes. The body, designed by Touring of Milan, is of multitube construction.



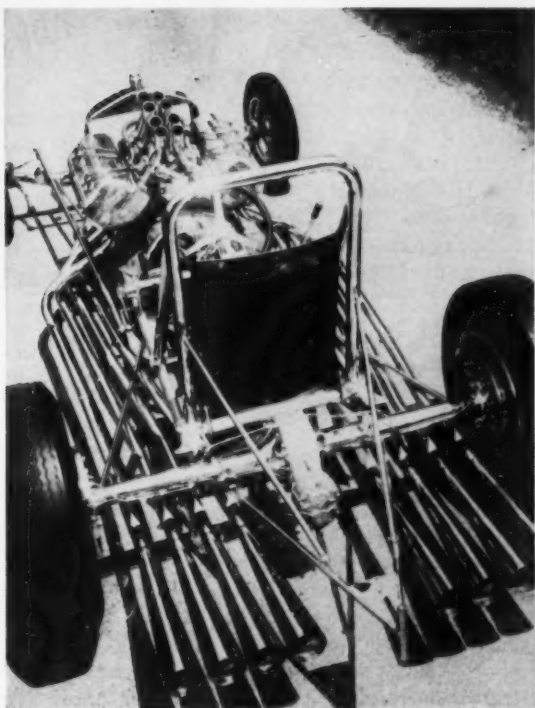
Youthful speed demon gets caught in this photo by photographer Dick Ruozinski of the Hammond, Ind., Times. He called it "Speedy" as an entry in the feature division of the Indiana photo contest.

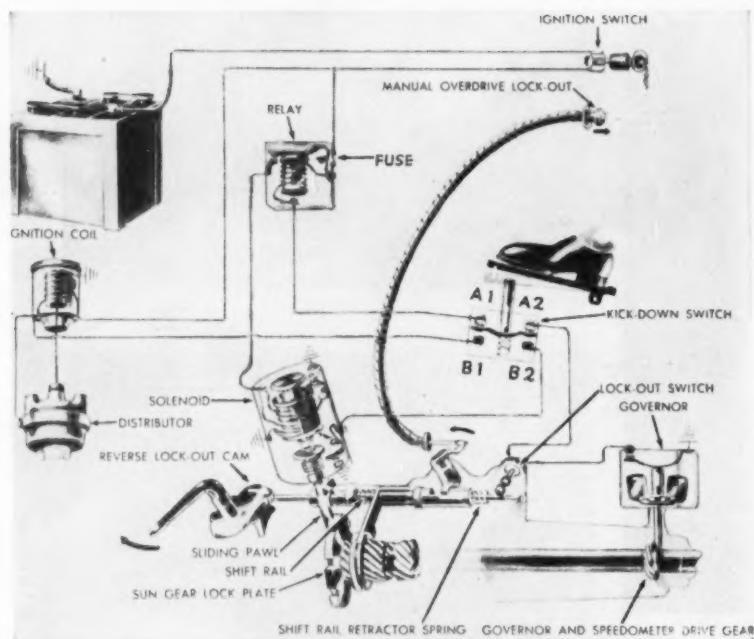
Nothing slows traffic down more than the sight of these three black crosses. They stand as mute reminders to passing motorists on a highway in Germany that three people died at this spot in traffic accidents.



Seems like everybody nowadays is doing the hula. Yes, even while water skiing! This young lady, shown above, demonstrates how easy it is to hula with the hula hoop while skimming over the water at Cypress Gardens. Frankly, it's much more fun to watch. Don't you agree?

With the '23 Ford Model T body removed, this dazzling dragster just looks like a maze of exhaust pipes on wheels. It was built by Charles Scott of San Bernardino, Calif. and was entered in 1958 National Championship Drag Races in Oklahoma City. With exception of frame, all chassis parts are chrome. Exhaust pipes hang from '32 Ford axle housings.





Schematic of Overdrive Controls

Explanation Of Rail Switch On Overdrives

I would like to get some information about the Warner overdrive used on Kaiser cars. What is the main purpose of the rail switch and could it be eliminated? I know of some overdrive systems not using the rail switch.

*Elwood Thomas
Hicksville, L.I., N.Y.*

THE main purpose of this switch is to lock-out the governor circuit when the dash control is in the out position. This rail switch is actuated by the shift rail. On the later models this switch was eliminated as the shift rail accomplished the same thing mechanically by moving the control plate so the pawl cannot engage it. It should not be eliminated on your job.

Negative Ground Rules Reviewed

It's no news that most cars and trucks now use negative ground systems, but a lot of the older equipment is still wired the other way around. The Service Department of Champion Spark Plug Company has issued a bulletin to mechanics reminding them to install batteries with the correct ground connections. This is especially important with the new transistor radios which require negative ground.

Here's how to check the polarity in case of doubt. Before starting the engine, connect a voltmeter from the regulator "B" terminal to ground. For negative-ground systems, ground the voltmeter negative lead. The needle will swing up if polarity is correct.

Regardless of the vehicle's system, remember that the secondary (high tension) ignition system should still supply negative voltage to the spark plug terminals. This reduces the amount of voltage required by the plugs, and can give ignition system up to a third more "reserve."

To check ignition polarity, ground the positive lead of your voltmeter and, with the engine

for troubleshooting



running, momentarily touch the spark plug terminal. If the needle swings up-scale, polarity is O. K.

Problem With F 600 Ford Vacuum Brakes

I am having brake trouble with an F 600 Ford 1½ ton truck with vacuum booster. After the truck stands for a few days the master cylinder becomes completely dry. Then the brakes must be bled because there is always air in them. This is what we have done to try to correct this situation. We took all the wheels off to check for leaks. We overhauled the booster and also checked the booster hose to the engine vacuum. The hose is dry inside and still no sign of fluid. We have bled the

brakes 10 or 12 times. Then for 5 or 6 days the brakes are OK. But let the truck stand for a few days and the brakes are gone again. We have parked it on a clean cement floor and have not found any spots on floor. What do you think is causing this problem?

*Mr. Garrick
Garrick Standard Service
Medicine Lake, Mont.*

SINCE there is no visible leak, the only place the fluid could go would be into the vacuum cylinder or drawn into the manifold. Even though this unit has been checked, it is still possible that the control valve is leaking slightly. I would suggest looking at the exhaust to see if it is smoking and checking the exhaust odor.

text should have appeared:

With each new compression ring installed in its groove and the face of the ring flush with the face of the ring land, it should be possible to insert a .0015 inch feeler gage beside the ring completely to the bottom of the groove. Oil rings should be free in the groove.

If the ring groove is too narrow and the clearance is less than .0015 inch, the width of the ring should be reduced. Do this by rubbing the top side of the compression and the bottom side of the oil ring on emery cloth. Hold the emery cloth flat on a face plate or a piece of plate glass. When the proper width is obtained, the side of the ring where the metal was removed should be polished with crocus cloth.



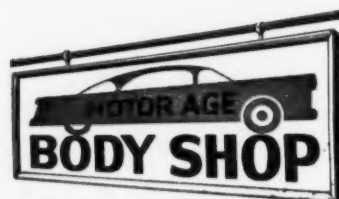
Ring Clearance Figure In Oct. Was Incorrect

IN THE October issue of Motor Age there was a typographical error on specifications for ring clearance. The figure .015 inch was used instead of .0015 inch. The reference appeared on page 43 in the article "Profits and How!—From Engine Overhaul."

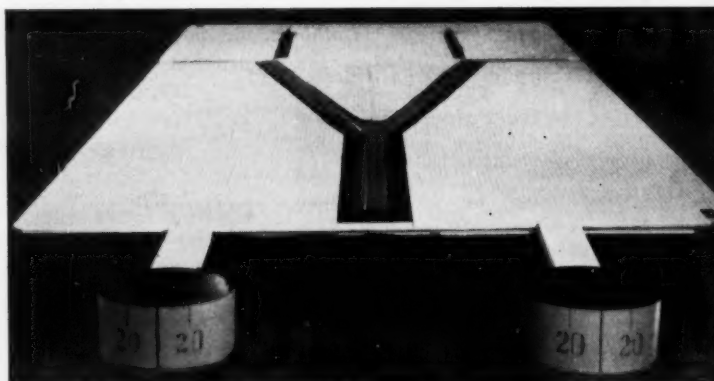
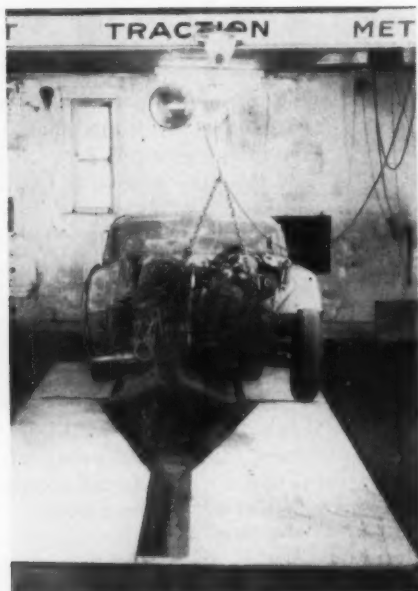
Here is how the original con-



Straightener depends upon applying overall traction to damaged area



New Push and Pull Device Speeds Body and Frame Straightening



When not in use the weight traction device recesses in floor as shown above. At left, the device goes to work by raising car, hooking and lowering. Just the right force is set in motion to reclaim damaged area.

A FRAME and body straightening and steering alignment device that operates upon a new principle has been developed by Fagan Car-Care Equipment and Engineering, Chicago. The new straightener depends upon applying overall traction to the bent frame. It does this along the approximate line through which the damaging force was exerted. Thus drawing out the bent members by a force opposite to the force that

bent them. What about the unit's make-up?

The equipment is simple in design and operation. It in part consists of a hoist. The hoist allows one end of the car to be suspended in air to give it freedom to move. Also a telescoping tubular beam is part of the unit. This is pivoted at one end and free at the other. It fits into a recess in the floor plate when not in use. Additional parts are

(Continued on page 74)

Wrecked Cadillac is shown just before repair work was begun by Fred Bethel and his body repairmen.



What a Repair Bill!!

THE pictures on this page present a unique before and after body shop story. According to Ralph H. James, Executive Director of IGO, the cost of repairs for this 1958 Cadillac was the largest in dollars and cents that he had ever heard of on an American make automobile.

The total cost of the job was \$5,137.64. It took 97 days to repair the car. Job was done by IGO member, Fred Bethel, Bethel Paint and Body Service, 2519 Main Street, Dallas 26, Texas.

Little remains of the Cadillac's original body after damaged sections have been removed.

Below is shown the completed job which took 97 days to repair and cost the customer \$5,137.64.



BODY SHOP TIPS

Using Improvised Dolly For Close Quarter Work

Sometimes when repairing a door or a quarter panel there are some low spots that are hard to knock out because of close quarters. Take a can and cut it in half. Cut a used valve stem $3\frac{1}{2}$ to 4 inches from the narrow end. Then put the valve head first in the can and pour in hot lead, enough to cover two inches from the bottom. When the lead cools, knock it from the can. Then grind the valve edge to a point. This gives me a dolly to insert into the door part, holding the point out toward the low spots. With this weight behind it, take a slapper or a cold shrinking hammer and strike a blow from the outside. This lifts out the dent and allows you to finish it without using lead. *William M. Ottani, 10223 Bryson Ave. South Gate, Calif.*

Tips On Uses Of Masking Tape In Body Shop

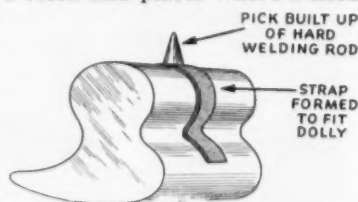
There is nothing like masking tape for use in my body shop. I use it as a drill template for installing mouldings and accessories. The tape prevents the drill from slipping and scratching the paint. I also use it to tape the bumper edges while polishing gravel pans. This prevents injuries from sharp edges. *Ralph Patsch, I. C. Patsch & Sons, Pike St., Houston, Pa.*

Easy Way To Fill Body Holes

My tip for an easier way to fill a radio aerial hole or other holes is to first clean around the hole with a sander, about two or three inches. Then take a torch and solder and tin. Cut a small piece of metal about half an inch or so larger than the hole. Clean and tin one side of it. Place over hole and melt together. Let it cool and tap down edges of metal. Clean, tin, lead and prepare for priming and painting. *Clarence M. Causez, North Mullins Auto Body Works, Mayers St., N. Mullins, South Carolina.*

Handy Pick Mounted On Dolly

On the newer models of cars, I often find places where I need



a pick hammer but there isn't room to operate one. I take a short piece of small strap iron and form it to fit over the small side of my all-purpose dolly. Then, using hard rod I build up a pick on it. I pick by holding it in my hand and swinging it. If I can get the room to swing I can usually get the job done.

The dolly seems to have the weight needed to drive pick. *Joe Waggoner, Sandpoint Motor Co., Sandpoint, Idaho.*

Easy Way To Clean Out Putty Cans

Some body putties and body plastics are packaged in pressed lid can containers. Removing the last of the contents is difficult. Cutting off the lid retaining ring with a can opener, makes removal of contents very easy. It can be removed from the sides and bottom with a flat square tool or putty knife. *Adolph Le Pisto, Box 871, White Selmon, Washington.*

Replacing Front Fender Mouldings

Here's a way to eliminate loosening the back of the fender when replacing front fender mouldings on 1956 and 1957 Chevrolets. Drill $\frac{1}{16}$ inch holes and use clips for belt mouldings that fit 1941 to 1946 Chevrolets in the front three holes where it is difficult to remove the nut. This will enable you to snap the front part of the moulding on the fender. *Ray Sulfridge, Ewing Motor Co., Ewing, Va.*

BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.



Tow Truck Hauls in Business

Eastern shop boosts income and repairs volume

ADDED income and extra repair work has come about through the decision to acquire a tow truck and a tractor. So says Otis Stine; he runs Stine's Repair Shop in York, Pa.

"We do not like to stand still and just wait for work to come in," explains Otis Stine. "As our specialty is truck work, we have found the addition of a tow truck and a tractor to be an excellent help in our overall operations."

Many new highways are being constructed in and around York. Thus, one can see the opportunity for towing. Especially for

trucks. Because of all the calls that Stine received for towing services, he decided to add a tow truck to his business. This truck has been kept so busy on tow jobs that he has recently added a second one and now has two trucks. Twenty-four hour towing service is offered. Both trucks are kept busy all during the week.

The towing charge is \$6.00 per hour for truck towing. In 60 per cent of the cases, the trucks are towed directly to his shop where they remain until the owner moves them. Many of these truckers remember

(Continued on page 73)

Below: Stine (left) checks brake operation

Above: Bringing in trailer for service work.





Headlamp Body Adjuster Bracket Kit Available

It is no longer necessary to replace the complete headlamp body, in case of a broken adjusting screw bracket. Instead, an adjusting screw assembly kit, containing a nylon bracket and adjusting screw, plus attaching screws and nuts, is available from the Cadillac parts warehouse for replacement purposes.

The old headlamp nylon bracket should be removed by drilling out the rivets. New bracket and adjusting screw can be installed with the two attaching screws and nuts included in the kit.

Squawking Noise In Air Suspension System

When a squawking noise is traceable in Pontiacs to the air suspension system, replace former check valve, 5533271 with intake check valve core, part 5540498. The new core is also used in late production height control valves.

To install new check core:

- a. Disconnect valve intake pipe from intake adapter.
- b. Remove intake adapter from intake valve stem.
- c. Unscrew intake check core from valve stem.
- d. Install new check core, part 5540498, in valve stem.
- e. Install intake adapter on valve stem, using care not to lose screen in core end of adapter.

f. Connect intake pipe to intake adapter using new "O" rings.

NOTE: Since valve cores are

designed with different spring rates, depending upon their function, the correct cores must be used in locations specified.

Facts And Figures On Car Tune-Ups

The next time a customer "balks" at the idea of investing in a tune-up for his car, throw him a few of these statistics from Champion Spark Plug Company.

If he drives the average 10,000 miles per year, Champion reports, his spark plugs probably fired some 15 million times since their last replacement. The carburetor may have mixed as much as 700 gallons of gasoline with over 6 million gallons of air.

The distributor points have made contact about 15 million times while the water pump has circulated the equivalent of about 150,000 gallons of water.

Meanwhile, each piston will have traveled over 3,000 miles up and down the cylinder.

It's quite impressive when you think about replacement parts in this light.

Install New Screws When Adjusting Headlamps

Here is a suggestion for adjusting the headlamp aim, or replacing a headlamp bezel on early 1958 Cadillacs. Servicemen should install new aiming screws and bezel retaining screws that have a larger diameter head. There have been cases where the loss of headlight aim and loss of the bezel have resulted from the original production screws working through the attaching holes.

It may also be necessary to use screws that are longer in length.

Lack Of Vent Causes Fuel Tank Collapse

There have been cases of collapsing 1958 Ford fuel tanks. These can be attributed to the lack of an air vent groove in the fuel tank filler pipe. In such cases a groove should be "worked" into the neck with a blunt nosed chisel.

When replacing a collapsed tank, be sure to check the filler pipe. See if it has an air vent. This will ensure against the collapse of the replacement tank.

Collapse of an vented tank occurs as it becomes empty and leaves a vacuum inside the tank. This allows outside air pressure to collapse the tank.

Special Clips Help Eliminate Brake Squeal

On 1957-58 model Chryslers and Imperials when a brake squeal develops at the end of a stop, it can be eliminated by installing special clips under the brake drum squeak springs as follows:

1. Remove wheel from brake drum and hub assembly.

2. Install three of the special clips on the drum with the hooked end under the present brake drum squeak spring.

NOTE: If the old brake drum squeak spring is weak or damaged, replace with new spring.

3. Install the three special clips per drum 120° apart.

CAUTION: Make sure drum speak spring and clips do not interfere with wheel-balancing weights.



MOTOR AGE

Index for 1958

SPECIAL EDITORIAL FEATURES

	Month	Page
"Where Can I Get Trained Mechanics?"	Jan.	71
Business Guide for 1958	Jan.	75
"To Sell-Serve" Theme Dominates		
NADA Convention	Feb.	42
Foreign Cars and the American Market	Feb.	52
Why are Cars so Hard to Work on?	Apr.	42
Meet "Mr. Inside" and "Mr. Outside"	July	37
Mechanical Highlights from		
Indianapolis	July	58
From This Came Success, Volume and		
Profits	Aug.	37
IGO Convention Address: Can You Save		
13 Million Unsafe Vehicles?	Aug.	42
How Volume Service Dept. Solved		
Customer Relations Puzzle	Aug.	52
How Motor Age Came to My Rescue	Aug.	53
Mechanics Wanted, Mechanics Trained	Aug.	54
Enforce Safety in Your Shop	Aug.	63
Oh, How Volume Grows!	Sept.	46
Modernizing Program for this Volume		
Shop	Oct.	37
The "Backward Look" for '59	Nov.	56
How Testing Equipment Builds Tune-up		
Volume	Dec.	21
Know the Law	Dec.	28
Annual Index of MOTOR AGE Articles		
for 1958	Dec.	45

NEW CARS AND TRUCKS

	Month	Page
New Thunderbird Now Four-Passenger	Feb.	56
Corvette Offers New Options	Feb.	57
Hardtop Added to Packard Line	Feb.	58
Light Trucks	Apr.	85
Tractors, Wheel Types	Apr.	86
Buick: Complete New Line for '59	Sept.	44
Preview of Mechanical Highlights of		
'59 Chrysler Line	Sept.	59
Motor Age Auto Show Introduction	Oct.	45
Ford Offers New Lightweight		
Automatic Transmission	Oct.	46
Chevrolet Restyles Series	Oct.	48
Plymouth Stresses "Massive" Look	Oct.	50
New Engines for Chrysler	Oct.	52
Imperial Offers 3 Hardtop Roof		
Options	Oct.	53
DeSoto Features New Styling	Oct.	54
Dodge Changes Front-End Styling	Oct.	55
Rambler Shows 11 Models	Oct.	56
Ambassador Restyles Rear Fins	Oct.	57
Pontiac Features New Body	Oct.	58
Olds Displays Two New Engines	Oct.	59
Fresh Styling Treatment for Corvette	Oct.	60
New Silhouette for Cadillac	Oct.	61
Chevrolet Adds El Camino to Truck		
Line	Oct.	62
New Series Dodge Pick-up Trucks	Oct.	63
Motor Age Auto Show (introduction)	Nov.	49
Roof Line Goes Lower on New Mercury	Nov.	50
New Styling Treatment for Lincoln	Nov.	51
Edsel Mounts on 120 in. Wheelbase	Nov.	52
Studebaker Lark Makes Bow	Nov.	53
Two Truck Series for Studebaker	Nov.	54
New Ford Trucks Introduced	Nov.	55

(Continued on next page)

MOTOR AGE INDEX

NEW DEVELOPMENTS

	<i>Month Page</i>
The Superhighway Program and Your Shop's Location	Feb. 37
Automatic Steering in Research Stage ..	Mar. 84
Indianapolis Preview: New Developments Promise Great Race ..	May 37
Big Kick in Willy's Mechanical Mule ..	May 44
Hoobs Unveils New Automatic Transmission	June 40
Dutch Car Features V-Belt Drive	June 63
How Volume Service Dept. Solved Customer Relations Puzzle	Aug. 52
Mechanics Wanted, Mechanics Trained ..	Aug. 54
Preview of Mechanical Highlights of '59 Chrysler Line	Sept. 59
Firebird III Features Single Stick Control	Sept. 67
Ford Offers New Lightweight Automatic Transmission	Oct. 46
Power Booster Aims at Increased Horsepower	Oct. 78
New Resin-Welding Process	Nov. 63

MANAGEMENT FEATURES

	<i>Month Page</i>
'58 Forecast . . . Cloudy, Eventual Clearing	Jan. 60
Taxes and the Dilemma of Depreciation ..	Jan. 42
Tax Quiz	Feb. 98
Is Truck Selling a Business, a Side Show or a Battle Royal?	Mar. 50
Protecting Your Business	Mar. 54
Put Your Business into the Circle of Safety	Apr. 40
Auto Clinic Stresses Customer Satisfaction	May 60
It Takes Two to Chisel	May 64
What to Know about Leases	June 52
Meet "Mr. Inside" and "Mr. Outside" ..	July 37
Know the Law	July 44
Are You a Good Credit Risk?	July 53
From This Came Success, Volume and Profits	Aug. 37
Know the Law	Aug. 57
Oh, How the Volume Grows!	Sept. 46
Chop, Chop that Overhead	Oct. 40
Volume Service 'round the Clock	Nov. 39
Know the Law	Nov. 48

ENGINE KNOW-HOW

	<i>Month Page</i>
An Exclusive Look at Edsel's Innards ..	Jan. 43
Modern Rebuilding Techniques on Small Engines	Mar. 37
Inside and Outside of Inboard and Outboard Motors	Mar. 46
Good Ring Jobs Don't Fail	Mar. 55
Basic Education: Troubleshooting ..	Mar. 60
Valve Troubles: Their Cause and Cure ..	Apr. 37
General Engine Data, Pistons	Apr. 50
Piston Rings, Piston Pins, Connecting Rods	Apr. 51
Valves, Intake and Exhaust	Apr. 54
Gasoline Engines	Apr. 92
Big Kick in Willys Mechanical Mule ..	May 44
Power Mower Service on Jacobsen Two-Cycle Engine	May 54
Installing Bearings: Do it Right the First Time	June 43
Pop O'Neill Fills a Prescription	July 60
Profits and how with Engine Overhaul ..	Oct. 42
59 Ways to Service '59 Cars	Dec. 23

ELECTRICAL AND TUNE-UP

	<i>Month Page</i>
How to Aim Dual Headlights	Jan. 62
Tune-Up: A Basic Outline for Better Profits	Jan. 94
Spark Plugs: Care, Cleaning and Correction	Feb. 44
Basic Education: Troubleshooting	Feb. 54
'58 Ford Tune-Up Tips	Mar. 44
Basic Education: Troubleshooting	Mar. 60
What to Do with Flood-Damaged Cars ..	Apr. 44
Fan, Battery, and Electrical Supply System	Apr. 58
Starting and Ignition Systems	Apr. 60
Ignition, Timing, Spark Plugs, Clutches	Apr. 62
Lamp Bulbs, Fuses, Circuit Breakers ..	Apr. 64
Tune-Up Data on 1953-58 Cars	Apr. 77
Small Gasoline Engine Tune-Up	Apr. 94
Basic Education on Troubleshooting ..	June 44
Updating '57 Cars with Dual Headlights	June 62
Talk Tune-up and Watch Your Volume Grow	July 42
How Weather Affects Ignition Timing ..	July 57
IGO Convention Address: Can You Save 13 Million Unsafe Vehicles?	Aug. 42
Latest Equipment and Know-How Make Sure Connection for Profit	Aug. 44
Electrical Chex That Spark Profits	Aug. 46
Correct Diagnosis Builds Customer Confidence	Aug. 66
Carburetion and Tune-up Go "Hand in Hand"	Sept. 60
Instruments Don't Guess	Nov. 42
Safer Lighting for Later Cars	Nov. 57
How Testing Equipment Builds Tune-up Volume	Dec. 21
59 Ways to Service '59 Cars	Dec. 23
Instruments Don't Guess—Part II	Dec. 32
Correct Diagnosis for Customers' Problems	Dec. 34

QUICK SERVICE

	<i>Month Page</i>
Lost & Found Dept.: For '58 Fillers, Dipstick	Jan. 58
Basic Education: Troubleshooting	Mar. 60
What to Do with Flood-Damaged Cars ..	Apr. 44
Gasoline Engines	Apr. 92
Power Mower Service on Jacobsen Two-Cycle Engine	May 54
Special Tools Speed Body Repairs	June 58
Quick Answer to Customers' Troubles ..	July 54
How Weather Affects Ignition Timing ..	July 57
Electrical Chex That Spark Profits	Aug. 46
Plastic Solder Speeds Metal Surface Repairs	Aug. 50
Step by Step Repairs of Tubeless Tires ..	Sept. 56
59 Ways to Service '59 Cars	Dec. 23
Correct Diagnosis of Customers' Problems	Dec. 34

RADIATORS AND COOLING SYSTEMS

	<i>Month Page</i>
What to Do with Flood-Damaged Cars ..	Apr. 44
Fuel and Cooling Systems	Apr. 56
Putting the Gas Hog on a Diet	June 50
Quick Answers to Customers' Troubles ..	July 54
Sell Cooling System Service	Oct. 72
Power Booster Aims at Increased Horsepower	Oct. 78
59 Ways to Service '59 Cars	Dec. 23

for 1958

BODY SERVICE AND PAINTING

	Month	Page
Labor and Materials "Sharp Cuts"	Jan.	68
Paint Department Thrives in Separate Quarters	Feb.	60
New Type Sliding Roofs for American Cars	Mar.	80
Passenger Car Body Data	Apr.	48
Tips on the New Acrylic Lacquers	May	50
Special Tools Speed Body Repairs	June	58
Updating '57 Cars with Dual Headlights	June	62
Refinishing Techniques for the Volume Body Shop	July	48
Plastic Solder Speeds Metal Surface Repairs	Aug.	50
Rechrome Those Rusted Bumpers!	Sept.	68
"Bolt-on" Sports Car Body for Volkswagen Chassis	Oct.	71
Epoxy Plastic Makes Repair Jobs Easy	Nov.	60
New Push-Pull Device for Frame Straightening	Dec.	40
What a Repair Bill!	Dec.	41
Tow Truck Helps Build Volume	Dec.	43

MERCHANDISING AND SALES

	Month	Page
Happy Customers Thru Preventive Maintenance	Jan.	50
Service Absorption vs Sales Absorption	Feb.	48
Sell the Tire, Not the Price	Feb.	64
I Left the Back Alley for Main Street	Mar.	40
Auto Clinic Stresses Customer Satisfaction	May	60
It Takes Two to Chisel	May	64
Power Brakes: Tips for Selling and Servicing	June	60
Talk Tune-up and Watch Your Volume Grow	July	42
How Motor Age Came to My Rescue	July	52
From This Came Success, Volume and Profits	Aug.	37
Latest Equipment and Know-How Make Sure Connections for Profit	Aug.	44
Shop Appeal Wins Feminine Customers	Aug.	64
Florida Automotive Center Finds Formula for Volume	Sept.	41
How to Sell Shock Absorbers	Nov.	46
Specialist Builds Automatic Transmission Volume	Dec.	26
Tow Truck Helps Build Volume	Dec.	43

STEERING, SUSPENSION & WHEEL ALIGNMENT

	Month	Page
Jacking and Towing Tips for Air Suspension Cars	Feb.	40
Automatic Steering in Research Stage	Mar.	84
What to Do with Flood-Damaged Cars	Apr.	44
Front Suspension and Steering	Apr.	72
Wheel Alignment, Rear Suspension	Apr.	76
Indianapolis Preview: New Developments Promise Great Race	May	37
Know Your Power Steering	May	40
Let's Go Straight on Crooked Front Ends	June	37
Repairing Air Suspension Compressors	July	46
Quick Answers to Customers' Troubles	July	54
IGO Convention Address: Can You Save 13 Million Unsafe Vehicles?	Aug.	42
Correct Diagnosis Builds Customer Confidence	Aug.	66
Step by Step Repairs of Tubeless Tires	Sept.	56
How to Sell Shock Absorbers	Nov.	46
59 Ways to Service '59 Cars	Dec.	23

BRAKES & SERVICE

	Month	Page
Servicing Self-Adjusting Brakes	Jan.	46
Servicing Chevrolet Truck Brakes	Jan.	54
What to Do with Flood-Damaged Cars	Apr.	44
Tires and Brakes	Apr.	68
Indianapolis Preview: New Developments Promise Great Race	May	37
Basic Education: Troubleshooting	May	48
Volkswagen: Roundup of Adjustments	June	54
Power Brakes: Tips for Selling and Servicing	June	60
Quick Answers to Customers' Troubles	July	54
IGO Convention Address: Can You Save 13 Million Unsafe Vehicles?	Aug.	42
59 Ways to Service '59 Cars	Dec.	23

TRANSMISSION AND AXLE MAINTENANCE

	Month	Page
Basic Education: Troubleshooting	Mar.	60
Adjusting Bands on Automatic Transmissions	Mar.	62
What to Do with Flood-Damaged Cars	Apr.	44
Ignition, Timing, Spark Plugs, Clutches	Apr.	62
Propeller Shaft and Rear Axle	Apr.	75
Transmission—Conventional and Conventional with Overdrive	Apr.	98
Automatic Transmissions	Apr.	99
Basic Education: Troubleshooting	May	48
Hobbs Unveils New Automatic Transmission	June	40
Basic Education on Troubleshooting	June	44
59 Ways to Service '59 Cars	Dec.	23
Specialist Builds Automatic Transmission Volume	Dec.	26

CARBURETORS AND FUEL SYSTEMS

	Month	Page
Basic Education: Troubleshooting	Feb.	54
What to Do with Flood-Damaged Cars	Apr.	44
Valve Timing, Lubrication and Exhaust Systems	Apr.	53
Fuel and Cooling Systems	Apr.	56
Basic Education: Troubleshooting	May	48
Putting the Gas Hog on a Diet	June	50
IGO Convention Address: Can You Save 13 Million Unsafe Vehicles	Aug.	42
Fuel Economy Thru Complete Carburetor Service	Sept.	48
Carburetion and Tune-up Go "Hand in Hand"	Sept.	60
59 Ways to Service '59 Cars	Dec.	23

FOREIGN CARS & SERVICE

	Month	Page
Foreign Cars and the American Market	Feb.	52
Specifications for Foreign Cars	Apr.	81
Taurus: Ford's Foreign-Built Job Enters American Market	May	58
International Automobile Show	May	62
Volkswagen: Roundup of Adjustments	June	54
Dutch Car Features V-Belt Drive	June	63
Servicing the Hillman Minx	Sept.	70
Powerful MGA Model Makes Debut	Sept.	74
"Bolt-on" Sports Car Body for Volkswagen Chassis	Oct.	71
Highlights of the New Foreign Cars	Dec.	29





AIR CONDITIONING & SERVICE

	Month	Page
Specialist in Car Air Conditioning	Jan.	64
Learn and Earn with Auto Air Conditioning	Feb.	46
Should I specialize in Car Air Conditioning?	June	49
59 Ways to Service '59 Cars	Dec.	23

January 1959 **ASL** MOTOR AGE'S



QUICK CHECKS FOR QUICK PROFITS

SUN.	MON.	TUES.	WED.
4 	5 CAR CLEAN UP WEEK	6 "GIVE YOUR CAR A 'NEW LOOK' FOR THE NEW YEAR"	7
11 	12 BRAKE SERVICE WEEK	13 "FOR SAFETY'S SAKE CHECK THE BRAKES"	14
18 	19 ELECTRIC WINDOW LIFT WEEK	20 "DON'T NEGLECT TO CHECK ELECTRIC WINDOW LIFTS"	21
25 	26 ALIGNMENT WEEK	27 "ALIGNMENT CHECKS CUT TIRE WEAR"	28

Let Motor Age's
MERCHANDISING CALENDAR WORK FOR YOU

MERCHANDISING CALENDAR

NAMES OF EMPLOYEES						
\$ales						Week's \$ales
\$ervice						
\$core						
\$heet						
First Week						
Second Week						
Third Week						
Fourth Week						
Total Monthly \$ales						

THURS.	FRI.	SAT.
8	9	10
1	2	3
<ul style="list-style-type: none"> ✓ Check upholstery, floor mats & door panels. ✓ Check minor dents & rust spots. ✓ Check for dented & missing chrome. ✓ Check weather strip around doors & windows. ✓ Check body finish & sell paint, polish jobs. 		
15	16	17
<ul style="list-style-type: none"> ✓ Check linings, drums & wheel cylinders. ✓ Check brake pedal travel. ✓ Check hand brake. ✓ Check master cylinder fluid. ✓ Check leaky cylinders. 		
22	23	24
<ul style="list-style-type: none"> ✓ Check master switch operation. ✓ Check for worn or binding window channels. ✓ Check for loose wire connections. ✓ Check current draw of electric motors. ✓ Check lift springs for proper tension. 		
29	30	31
<ul style="list-style-type: none"> ✓ Check caster, camber & toe-in. ✓ Check wheel balance & rotate tires. ✓ Check wheel bearings & repack. ✓ Check power steering & conventional steering. ✓ Check front end parts & shock absorbers. 		

CALENDAR REPRINTS NOW AVAILABLE

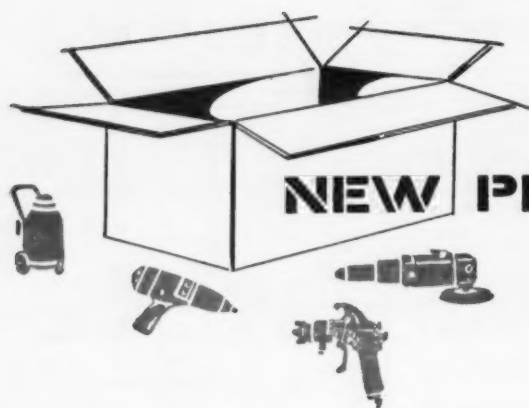
Motor Age's Merchandising Calendar is available in reprint form as long as the supply lasts at no cost to you. This offer is limited to thirty days after publication.

Send for your free Merchandising Calendar NOW!!

Write to the Editor of Motor Age, Chestnut and 56th Sts., Phila. 39, Pa.

HOW TO USE MERCHANDISING CALENDAR

When you receive your Calendar reprint, hang it in a prominent spot in your shop or service station. Place your employees' names in the \$core \$heet. Then hold an informal sales and service contest. See who gets the highest sales score at the end of the month, by promoting sales and services mentioned in the check lists. As an incentive, offer a prize to the winner.

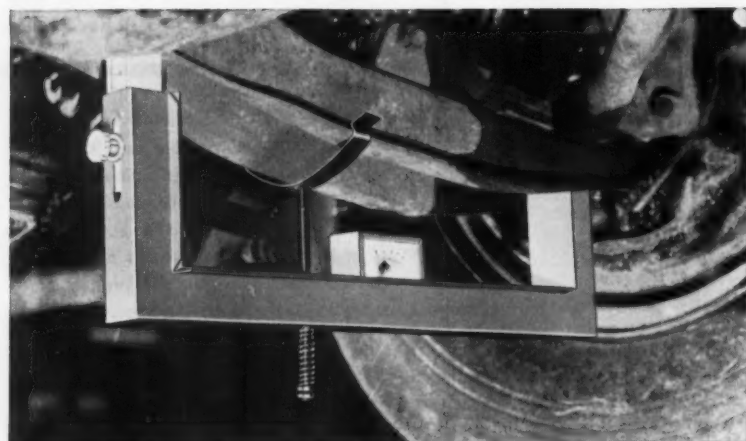


SHOW WINDOW



320. Power Jack

Crown Controls Company, Inc. has a new $1\frac{3}{4}$ ton operated jack. No air lines or electric cords are needed. A 12 volt auto battery, built-in automatic charger, and hydraulic gear pump are all self-contained in the power case at the rear of the jack. It is said to lift cars to a height of 30" in 10 seconds by pressing a button on the power case. Rear swivel casters and wide spread handle grips are designed for quick spotting.



321. Torsion-Aire Gauge

Snap-on Tools Corp.: New Torsion-Aire Height Gauge . . . designed especially for use on all Chrysler products equipped with Torsion-Aire suspension. This new gauge consists of a metal frame 16" long, with an arm at each end and with a highly accurate, easy to read liquid level mounted on the frame between the arms. One arm is stationary and has a "C" shaped shoe on top, designed to bear firmly against the lower edge of the ball joint nut. The opposite arm has a movable sleeve, adjustable to manufacturer's recommended height settings. This sleeve is calibrated in $\frac{1}{16}$ " increments.

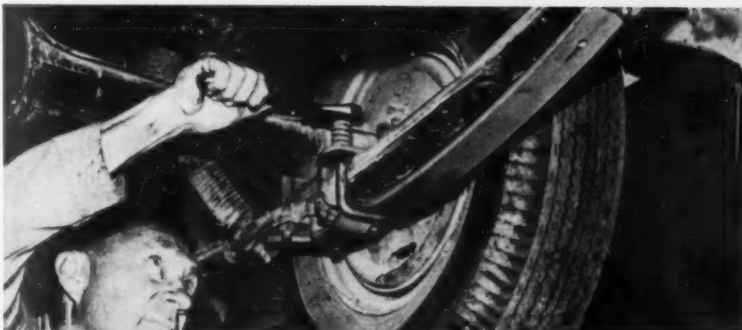
322. "Wren" Air Brush

Binks Manufacturing Company: An air brush has been introduced by the company for touching up scratches and pit marks. Designed for use by automotive service and repair men, the air brush, called the "Wren", is reported to be economical in price yet incorporates the latest in air brush design. The Wren is available in two models.



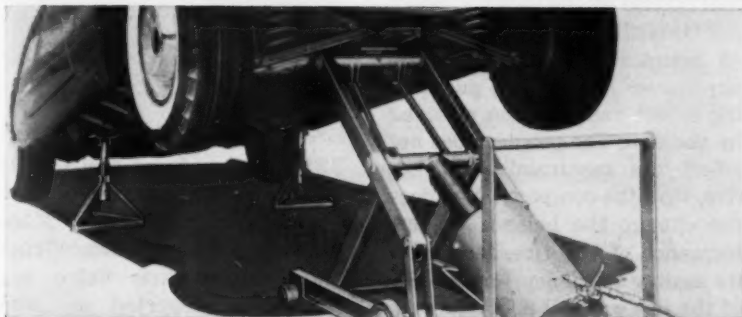
323. Equa-Loader

Cambria Spring Company is offering a new type adjustable auxiliary spring. Called an Equa-Loader, it is said it can be installed in a matter of minutes with ordinary tools on any model car, station wagon, or light truck with leaf springs. Lock nut adjustment gives up to 500 lbs. added weight capacity.



324. Front-End Lift

Automotive Equipment Mfg. Co., is offering an improved air-operated front end lift. The Lee "Jr." has been reported to be lengthened 2½ in. The lifting height has been increased 2½ in., allowing more working room for the mechanic. The mechanical safety device which locks the air lift at progressive working heights has been modified for still greater safety.



325. Wheel Balancer

Bear Mfg. Co. has a streamlined economy unit especially suitable for small-space operations. Designed for fast, easy operation, the new Golden Bear On-A-Car Balancer is equipped with latest type adapters for 14-inch and 15-inch passenger car wheels. No wrench is required, reports the company. The adapter quickly and safely locks to the wheel with cap screws in 15 seconds or less, and accurately centers itself.

(Continued on next page)

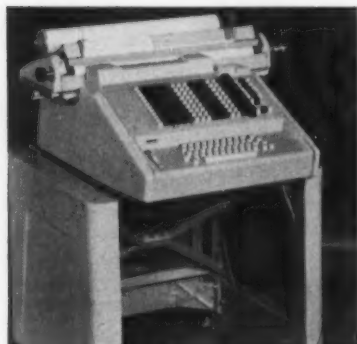


New Products Continued from Page 51



326. Rubber Powder

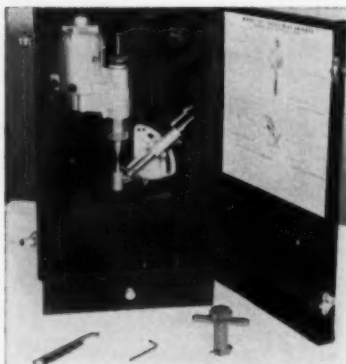
United States Rubber Co. is marketing a rubber powder that is said to make any tubeless tire puncture sealing. Installation of the powder in the tire is simple. The Company states that tubeless tires containing two-and-a-half ounces of the powder, called Air Guard, can be driven for 48 hours or more after being punctured. Even if the puncturing object has not been retained by the tire. The powder does not affect the repairability of the tire, says the company. Nor does not change the balance or performance of the tire. It retains its sealing efficiency for the life of the tire or until it is removed.



327. Accounting Machine

Burroughs Corp.: An accounting machine that produces figures and records which show

the up-to-date status of business activities is available. The records, says the firm, will show where every cent comes from, where it is and where it goes. The accounting jobs include accounts receivable, sales analysis, accounts payable. Also expense analyses, operating reports, financial control and statements, payroll, and the general ledger. All computations and most of the work are automatic.



328. Valve Seat Grinder

Hall-Toledo Inc. announces the improved Hall-Toledo Model EJ Eccentril Valve Seat Grinder. This eccentric valve seat grinder is reported as noteworthy for its accuracy, efficiency. By using the eccentric point contact method of valve seat grinding with the improved micrometer feed screw, the operator has complete control of the grinder. Also its rate of grind. This assures a perfect valve seat, reports the firm.

329. Blocks for Wrecker

The Ernest Holmes Company announces a new accessory. It is designed to prevent or retard the sliding of a wrecker during a rear-end pull on slippery snow, ice, mud, soft soil, asphalt or concrete. To achieve this, they



have developed two L-shaped, metal Scotch Blocks. Each is 17 inches wide for use under rear wheels. Either single or dual type. The operator places the Blocks directly back of both rear wheels. Chains are loosely fastened into two giant anchor hooks which clamp over the rear tailgate flange of the truck body. In this position, operator makes the necessary recovery hook-up.



330. One-End Lift

Blackhawk Mfg. Co. is offering a new 1½-ton air operated one end lift, model SJ-51. The lift has a standard two-way lever valve that uses either a tire inflator or quick coupler for ease of operation. The jack raises to full height in seconds, even under capacity loads, it is reported. The lifting arms extend from 14" to 48" to accommodate different bumper styles.

(Continued on page 54)

You Are Qualified to be a Member Of The Automotive Service League

This is a new and unusual organization open to all automotive service shops which have been qualified by Motor Age. If you haven't done so before, detach and return the postage free postcard below.

[The second and lower postcard is for more new product information.]



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LEAGUE
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☐ Specialty Shop

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Your Name Your Title

Address
(Street & No.) (City) (Zone) (State)

Frank P. Tighe, EDITOR MOTOR AGE
P.O. Box 102, Village Station, N. Y. 14, N. Y.

12/50

Please send me further information on the New Products, the code numbers of which I have circled below. (Be sure to circle the code number).

320	321	322	323	324	325	326	327	328	329
330	331	332	333	334	335	336	337	338	339
340	341	342	343	344	345	346	347	348	349
350	351	352	353	354	355	356	357	358	359
360	361	362	363	364	365	366	367	368	369
370	371	372	373	374	375	376	377	378	379
380	381	382	383	384	385	386	387	388	389
390	391	392	393	394	395	396	397	398	399

[Postcard valid for 90 days only.]

Your Name Your Title

Your Company

Your Business: Wholesaler Repair Shop Car Dealer

Address
(Street & No.) (City) (Zone) (State)

New Literature

331. Tool Catalog

K-D Manufacturing Co.: Eight new tools are described and illustrated in this recent catalog supplement. Tools include a flexible cable distributor adjuster for Delco-Remy, plus a "window holder." Also a molding clip installer for Chevrolet and Pontiac cars; brake shoe spring tools for Lockheed and Bendix; and a petcock drain tool with flexible cable.

332. Fuel Pump Catalog

Wells Mfg. Corp.: A fuel pump catalog has been re-

leased covering complete line of CAPAC Maximum Capacity Fuel Pumps for cars and trucks. It also includes Capac Fuel Pump Repair Kits, Diaphragm Kits, and Push Rods for use with fuel pump replacements on Ford, Lincoln, Mercury and Chevrolet. A full-page diagram shows construction and operating features of Capac fuel pumps. All tables and charts are printed in clear, open-face type for easy reading.

333. Muffler Catalog

International Parts Corp.: New catalog of International Parts mufflers, on tail and ex-

haust pipes, and exhaust system parts, has been introduced. In addition to listing mufflers for all domestic cars and trucks, it lists International Parts mufflers for foreign cars. It also introduces newly re-engineered four-inch diameter acoustically designed "True Tone Mufflers."

334. Tools Catalog

John Bean Div. of the Food Machinery & Chemical Corp.: Two catalogs describe a complete line of stationary and portable frame and body correction equipment. Describes units available for any size collision repair shop. New tools listed include rocker bar and 50 inch body pull uprights for body correction and normal frame damage repair. Catalogs also illustrate fully and explain in detail how the new tools fit on a floor or pit model of a Visualiner wheel aligner for repairs on any body or frame design.

335. Special Catalog

United Motors Service, Division of General Motors: A revised, broader-coverage edition TBA-Dealer catalog has been developed to provide service stations doing light repair work with a quick guide to application and specification data on popular service parts for cars and light trucks. The new edition includes four lines not covered in the original version—Rochester Carburetor, Moraine gasoline filters, Delco brake fluid, Delco hydraulic brake parts and New Departure front wheel bearings. More complete sections than in the previous edition cover Delco batteries, Delco-Remy ignition parts, Delco-Remy charging circuit parts, Packard Cable products and Delco shock absorbers.

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1959 Tune-up—Alignment Specifications

MAKE AND MODEL	ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT			
	No. of Cylinders Bore and Stroke (In.)	Maximum Brake H.P.	Spark Plug Make and Size (mm)	VALVES				IGNITION				Steering Axis Inclination (Deg.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	
				Seat Angle		Operating Tapet Clearance		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing ° T. C.					
				Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)									
AMERICAN MOTORS CORP.																
Rambler 6-5902, 5904, 5904-1, 5906, 5906-1	6-3 1/2 x 4 1/2	90	CA-14	45	45	.016C	.018C	.016	32	.035	3B	8°	0 to 1 1/2°P	1/4°N to 1/4°P	1/4 to 1/2	
..... 6-5910	6-3 1/2 x 4 1/2	127	CA-14	45	45	.012H	.016H	.016	32	.035	5B	6°11'	0 to 1 1/2°P	1/4°N to 1/4°P	1/4 to 1/2	
..... 8-5920	8-3 1/2 x 3 1/2	215	CA-14	30	45	.012H	.014H	.016	30	.035	7C	6°11'	0 to 1 1/2°P	1/4°N to 1/4°P	1/4 to 1/2	
..... 8-5960	8-4 x 3 1/2	270	CA-14	30	45	Hyd	Hyd	.016	30	.035	5B	6°11'	0 to 1 1/2°P	1/4°N to 1/4°P	1/4 to 1/2	
CHRYSLER CORP.																
Chrysler 8-MC1-L	8-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MC2-M	8-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MC3-H	8-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MC3-H (300-E)	8-4 1/2 x 3 1/2	380	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
De Soto 8-MS1-L	8-4 1/2 x 3 1/2	290	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MS2-M	8-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MS3-H	8-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MS3-H (Adventurer)	8-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
Dodge 8-MD1-L	8-3 1/2 x 4 1/2	135	AL-14	45	45	.010H	.010H	.020	39	.035	2 1/2°B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MD2-L	8-3 1/2 x 4 1/2	255	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MD3-L	8-4 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MD3-H	8-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-D-500	8-4 1/2 x 3 1/2	320	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
Imperial 8-MY1-L, MY1-M, MY1-H	8-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2°	0 to 1 1/2°P	0 to 1 1/2°P	1/4 to 1/2	
Plymouth 8-MP1-L, MP1-M	8-3 1/2 x 4 1/2	132	AL-14	45	45	.010H	.010H	.020	39	.035	2 1/2°B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MP2-L, MP2-M, MP2-H	8-3 1/2 x 4 1/2	230	AL-14	45	45	.010H	.018H	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-MP2-P	8-3 1/2 x 4 1/2	260	AL-14	45	45	.010H	.018H	.017	30	.035	10B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-Golden Commando	8-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2°B	6 1/2°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
FORD MOTOR CO.																
Edsel 8-57F, 58D, 63F, 64C, 71E, 71F	6-3 1/2 x 3 1/2	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	4B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-57F, 58D, 63F, 64C, 71E, 71F	6-3 1/2 x 3 1/2	200	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-57B, 58B, 63B, 71E, 71F, 76E	8-4 x 3 1/2	225	Ch-18	30 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Power Option	8-4 1/2 x 3 1/2	303	Ch-18	30 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
Ford 8-Custom 300, Fairlane, Fairlane 500	6-3 1/2 x 3 1/2	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	4B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Custom 300, Fairlane, Fairlane 500	8-3 1/2 x 3 1/2	200	Ch-18	45 1/2	45 1/2	.018H	.018H	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Special Option	8-4 x 3 1/2	225	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Power Option	8-4 x 3 1/2	300	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 3/4°	0 to 1°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Thunderbird	8-4 x 3 1/2	300	Ch-18	30	45	Hyd	Hyd	.015	27	.034	4B	6 3/4°	1/2°P to 1 1/2°P	1/2°P to 1 1/2°P	1/4 to 1/2	
..... 8-Thunderbird Power Option	8-4 1/2 x 3 1/2	350	Ch-18	45	45	Hyd	Hyd	.015	27	.034	4B	6 3/4°	1/2°P to 1 1/2°P	1/2°P to 1 1/2°P	1/4 to 1/2	
Lincoln 8-All	8-4 1/2 x 3 1/2	350	Ch-18	45	45	Hyd	Hyd	.015	27	.032	6B	7°26'	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
Mercury 8-Monterey	8-3 1/2 x 3 1/2	210	Ch-18	45	45	.019H	.019H	.015	27	.032	3B	7°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-Montclair	8-4 1/2 x 3 1/2	322	Ch-18	45	45	Hyd	Hyd	.015	27	.032	6B	7°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
..... 8-Park Lane	8-4 1/2 x 3 1/2	345	Ch-18	45	45	Hyd	Hyd	.015	27	.032	6B	7°	0 to 1 1/2°N	0 to 1 1/2°P	1/4 to 1/2	
GENERAL MOTORS CORP.																
Buick 8-4400	8-4 1/2 x 3 1/2	250 ³	AC-14	45	45	Hyd	Hyd	.015	30	.033	5B	7°	1 1/2°N	1/2°P	1/4 to 1/2	
..... 8-4600, 4700, 4800	8-4 1/2 x 3 1/2	325	AC-14	45	45	Hyd	Hyd	.015	30	.033	12B	7°	1 1/2°N	1/2°P	1/4 to 1/2	
Cadillac 8-60, 62, 75	8-4 x 3 1/2	325 ⁴	AC-14	44	44	Hyd	Hyd	.016	30	.035	5B ⁵	4°	1 1/2°N to 1 1/2°N	1/2°N to 1/2°P	1/4 to 1/2	
Chevrolet 8-1100, 1500, 1700	6-3 1/2 x 3 1/2	135	AC-14	31	46	Hyd	Hyd	.019	32	.036	7C	7°11'	1 1/2°N to 1 1/2°P	0 to 1°P	1/4 to 1/2	
..... 8-1200, 1600, 1800	8-3 1/2 x 3 1/2	185	AC-14	46	46	Hyd	Hyd	.019	30	.035	4B	7°11'	1 1/2°N to 1 1/2°P	0 to 1°P	1/4 to 1/2	
..... 8-Engine Option	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.035	4B	7°11'	1 1/2°N to 1 1/2°P	0 to 1°P	1/4 to 1/2	
..... 8-867	6-3 1/2 x 3 1/2	230	AC-14	46	46	Hyd	Hyd	.018	30	.036	4B	4°	1 1/2°P to 2 1/2°P	1 1/2°N to 1 1/2°P	0 to 1/2	
Oldsmobile 8-88	8-4 x 3 1/2	270	AC-14	45	45	Hyd	Hyd	.016	30	.030	5B	10°	0 to 1°N	1 1/2°N to 1 1/2°P	0 to 1/2	
..... 8-88S, 98	8-4 1/2 x 3 1/2	315	AC-14	45	45	Hyd	Hyd	.016	30	.030	5B	10°	0 to 1°N	1 1/2°N to 1 1/2°P	0 to 1/2	
Pontiac 8-5921, 5924	8-4 1/2 x 3 1/2	245	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	4°50'	1°N to 2°N	1 1/2°N to 1 1/2°P	0 to 1/2	
..... 8-5927, 5928	8-4 1/2 x 3 1/2	260	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	4°50'	1°N to 2°N	1 1/2°N to 1 1/2°P	0 to 1/2	
STUDEBAKER-PACKARD CORP.																
Studebaker 8-59S	6-3 x 4	90	Ch-14	45	45	.018C	.018C	.020	39	.031	2B	6°	1°N to 2 1/2°N	0 to 1°N	1/4 to 1/2	
..... 8-59V	6-3 1/2 x 3 1/2	180	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6°	1°N to 2 1/2°N	0 to 1°N	1/4 to 1/2	

ABBREVIATIONS

1—Left only; right, 1/4N to 1/4P.
3—When equipped with automatic transmission.

4—Eldorado models, 345.
5—Eldorado models, 7 1/2°B.
AC—A. C. Spark Plug Div.
AL—Electric Auto-Lite Co.

B—Before top center.
C—Cold.
CA—Champion or Auto-Lite.
Ch—Champion Spark Plug Co.

H—Hot.
Hyd—Hydraulic valve lifters.
N—Negative.
P—Positive.
TC—Top center.

1958 New Passenger Car Registrations by Makes by States

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Edsel	Ford	Imperial	Lincoln	Mercury	Oldsmobile	Packard	Plymouth	Pontiac	Rambler	Studebaker	Misc. Dom.	Foreign	Total		
Alabama	Sept. 210	61	746	37	27	69	14	669	6	12	69	166		205	119	72	15	1	314	2,612		
9 Mos. 2824	849	12312	460	332	1013	330	478	9521	100	174	1094	2057	6	3113	1690	1046	231	15	2828	41,083		
Arizona	Sept. 100	54	569	26	11	44	26	478	10	80	82	2		167	110	57	7		325	2,158		
9 Mos. 899	535	5747	230	144	472	240	3699	69	173	652	1061	14		1511	905	721	103	1	2496	19,692		
Arkansas	Sept. 69	30	600	17	8	43	12	496	2	2	52	60		143	65	65	21		151	1,838		
9 Mos. 1359	524	7627	206	183	669	176	6487	40	94	753	1658	16		1967	1204	634	232	1	1056	24,686		
California	Sept. 1276	924	7202	410	235	1122	178	6648	126	172	964	1074	25	2752	1015	1068	238		6991	32,422		
9 Mos. 11850	1085	85071	3997	2644	10444	2619	64823	1490	2434	9078	14587	196		27603	12493	10521	1998	15	53275	326,403		
Colorado	Sept. 120	81	1045	42	26	107	26	723	10	16	120	162		137	130	30			506	3,542		
9 Mos. 1606	799	10950	475	327	1248	352	7456	114	216	1316	2072	18		2567	1659	1801	288	18	3476	37,104		
Connecticut	Sept. 151	112	921	69	43	142	15	816	8	37	112	246		272	188	216	41		957	4,550		
9 Mos. 1942	1385	12045	811	554	1494	426	9802	151	337	1316	2953	38		5021	2413	2468	493	4	7216	50,869		
Delaware	Sept. 21	23	263	17	17	20	6	146	8		25	64		95	43	27	7		126	908		
9 Mos. 505	316	3787	189	155	298	104	2312	33	52	342	750	6		1394	590	290	75		860	12,058		
Dist. of Columbia	Sept. 51	39	388	34	10	61	6	292	8	9	67	66		216	54	43	7		445	1,600		
9 Mos. 554	554	4325	358	193	554	50	2944	101	94	478	913	13		1799	797	410	73	33	1795	16,033		
Florida	Sept. 507	437	2909	131	115	273	44	2583	47	106	355	589		1080	446	364	79		2924	13,019		
9 Mos. 5763	4602	29575	1165	962	2403	763	23704	515	1077	3181	6719	45		8756	4348	3395	667	20	17716	115,396		
Georgia	Sept. 343	100	1747	68	55	170	33	1341	7	20	130	226		500	245	176	37		1805	6,099		
9 Mos. 3663	1469	19721	666	472	1533	399	16289	129	263	1566	4277	43		5119	3419	1515	450	37	6039	67,069		
Idaho	Sept. 44	28	347	15	9	29	7	257	1	3	54	74		92	44	79	24		146	1,256		
9 Mos. 685	351	3141	167	122	386	148	2397	50	88	496	821	13		1068	802	855	198	10	1271	13,071		
Illinois	Sept. 1125	641	6121	299	159	437	130	4565	60	142	955	1273		1795	955	768	188		325	20,075		
9 Mos. 18216	7882	72749	328	240	524	1715	424	18653	7340	16722	175	18933		12625	9640	2306	295	8335	23,733			
Indiana	Sept. 161	99	2158	100	108	240	79	1920	19	55	256	624		803	384	317	184		3	580	8,596	
9 Mos. 6677	2613	25911	1193	1114	2574	1148	21466	314	569	2913	7883	148		8002	4954	3505	1977	36	3681	96,678		
Iowa	Sept. 252	95	1791	79	29	153	44	1402	13	24	207	291		274	328	189	64		7	223	5,667	
9 Mos. 3182	1042	17931	704	425	1568	529	14521	115	207	1904	3801	17		4380	3323	2200	569	60	1566	58,054		
Kansas	Sept. 303	82	1604	43	50	172	38	1171	6	16	189	266		3	464	237	186	45		4	366	5,225
9 Mos. 3247	1018	15785	627	525	1539	573	12903	115	232	1617	3337	35		4303	2929	1989	514	21	2219	53,519		
Kentucky	Sept. 219	60	36	81	36	7	713	10	16	69	16			166	69	16			179	1,038		
9 Mos. 2283	773	11263	384	308	936	386	8114	82	157	1300	2747	31		3147	1907	834	220	55	1269	36,306		
Louisiana	Sept. 225	80	1534	18	32	100	31	1180	2	26	125	271		1	221	203	65	38		431	4,643	
9 Mos. 2598	1129	16902	409	311	1097	375	13165	105	250	1472	3882	16		3268	2671	753	304	23	3026	51,756		
Maine	Sept. 90	30	600	27	17	64	11	506	5	64	70	4		204	116	105	35		297	2,250		
9 Mos. 921	367	4884	182	172	561	117	4421	33	65	584	832	17		1607	960	886	274	1	1914	18,818		
Maryland	Sept. 249	119	1673	88	78	217	23	1067	16	26	152	277		1	659	200	211	44		5	782	5,782
9 Mos. 2936	1275	10644	972	618	2105	402	12955	184	223	1641	3395	33		6933	2996	1863	432	15	4607	63,926		
Massachusetts	Sept. 477	203	2357	151	121	307	50	2044	21	46	265	595		5	956	398	594	65		12	1389	10,038
9 Mos. 4694	2391	21872	1277	1134	2681	514	19185	260	527	2372	6360	50		8807	3884	5485	561	99	8255	90,408		
Michigan	Sept. 1060	413	4901	205	276	485	154	4195	39	110	732	895		4	1509	840	732	143	11	1254	17,938	
9 Mos. 10629	5328	52961	1951	2055	5174	2453	41552	455	1312	7797	13908	69		15368	9644	7000	1184	49	8645	187,534		
Minnesota	Sept. 272	104	1657	75	57	158	23	1057	13	20	155	330		6	554	271	272	70		302	5,394	
9 Mos. 4413	1479	21303	997	799	2133	733	16648	209	385	2386	5378	64		6577	4300	3473	918	144	2374	74,683		
Mississippi	Sept. 182	23	687	18	14	28	7	343	6	4	54	6		137	67	36	15		137	1,038		
9 Mos. 1770	455	8031	238	183	482	164	6394	60	73	519	1684	6		1649	1332	474	208		5	1048	24,775	
Missouri	Sept. 391	181	2644	67	60	323	47	2001	16	25	173	421		1	803	392	198	76		589	8,428	
9 Mos. 4948	2121	28912	864	922	2673	615	21539	233	381	2279	5669	47		7658	4518	2385	844	11	3974	90,773		
Montana	Sept. 62	34	420	27	18	47	23	329	5	11	55	81		1	139	57	85	28		142	1,564	
9 Mos. 864	354	3871	212	132	449	195	3189	57	88	616	885	8		1141	713	855	260	9	1021	14,819		
Nebraska	Sept. 111	45	841	34	23	79	13	713	5	15	94	119		2	271	132	81	26		5	772	2,793
9 Mos. 1549	602	9644	362	202	850	29	8103	79	150	1041	1931	23		2566	1639	1033	263	61	1272	31,926		
Nevada	Sept. 16	19	162	12	3	24	8	142	2	11	26	45		1	39	27	12	14		156	721	
9 Mos. 199	210	1300	95	85	183	118	1151	28	76	237	358	9		418	315	102	86		1051	6,021		
New Hampshire	Sept. 32	24	282	14	6	33	4	204	4	27	37			92	41	71	20		201	1,092		
9 Mos. 443	238	3106	130	73	322	67	2332	21	55	311	482	1		990	522	714	148	2	1528	11,485		
New Jersey	Sept. 779	467	2670	307	203	433	62	2145	67	76	334	772		11	1439	606	364	103		1396	12,234	
9 Mos. 7348	5105	36710	3080	2223	4748	1139	24613	726	953	3632	9527	118		15922	6978	4687	1168	20	11686	138,621		
New Mexico	Sept. 89	18	675	18	17	65	14	341	5	4	54	6		1	137	68	54	16		6	796	2,796
9 Mos. 961	320	4659	212	178	493	198	3152	57	93	551	1012	9		1174	824	522	140	2	1181	15,678		
New York	Sept. 1349	813	6457	422	354	882	115	4856	84	192	920	1580		12	2555	1148	901	205	35	3659	26,539	
9 Mos. 18035	11704	80315	6015	4516	10703	2154	58159	1427	2349	9636	26938	234		31275	15881	11773	3200	860	28669	323,843		
North Carolina	Sept. 354	110	1565	90	68	160	23	1576	7	18	159	269		2	543	240	139	42		5	591	5,961
9 Mos. 3643	1388	14692	717	629	1427	390	15056	107	207	1360	3823	37		4395	2889	1419	486	11	2877	55,553		
North Dakota	Sept. 64	11	537	33	19	65	24	440	3	6	49	63		7	161	64	73	26		56	1,715	
9 Mos. 983	192	3049	282	180	483	234	229	713	101	471	921	7		1326	604	628	168	1	1061	14,045		
Ohio	Sept. 1062	357	4737	236	2672	7470	1739	44978	602	1233	7773	14417		137	18810	11058	6471	1659		6	1374	17,886
9 Mos. 12416	5014	54916	2736	2672	7470	1739	44978	602	1233	7773	14417	137		18810	11058	6471	1659	106	9771	203,969		
Oklahoma	Sept. 217	86	1386	36	29	112	15	800	10	20	155	256		2	330	175	187	31		5	300	4,152

Wearin' of the Grin



"AND JUST LIKE THE FARMER SAID, THERE WAS A FORK
IN THE ROAD !"

"Changing to Texaco stepped up sales 20% ...Texaco's 'bonus business' pays off"

AFTER 28 years in the petroleum business, The Holston Oil Co., Johnson City, Tenn., joined the Texaco family of Distributors. A gratifying increase in sales volume came fast.

"Within a short time after switching to Texaco, our business increased 20%," says John C. Howren, president of the firm. "And the Credit Card business of our 62 Dealers has shown a 300% increase! Texaco products are

sold and preferred by millions in all 48 states. This brings our Dealers a lot of extra 'bonus business' from out-of-town Texaco customers.

"We are glad to be associated with Texaco—a national marketer whose products are accepted without question by the motoring public. We like to do business with Texaco. They give us complete cooperation—and you can trust the man behind the contract."

HOLSTON OIL Co. has 62 Dealers in its 5-county operation, which requires 2 truck transports and 3 delivery tank wagons. President Howren has been with the company since it started, and is active in civic affairs.



THEIR SALES JUMPED FAST!



"I COULD TELL the difference in 3 weeks," says Texaco Dealer Ike Linville, Johnson City. "Business was up 20%. Seems everyone has a Texaco Credit Card, and likes Texaco products."



"IT WAS EASY to switch our customers to Texaco products because they know Texaco quality. Sky Chief Super Gasoline is very popular," says Cecil Rhines, Texaco Dealer of Johnson City.



"BIG CHANGE FOR THE BETTER," says Texaco Dealer Charlie Eller of Elizabethton. "Business is way up, including Credit Card business. Havoline Motor Oil has good acceptance."



Why there's a solid future with Texaco

HERE ARE 6 reasons why Dealers and Distributors *grow* at Texaco: **The best** petroleum products, known and accepted by car owners in all 48 states. Continuous research and development insure that TEXACO will always have outstanding products. **The best** and biggest national advertising program . . . constantly *selling* TEXACO Dealers to car owners everywhere. **The best** point-of-sale promotion material to help bring customers in and bring them back! **The best** customer credit card — in fact, the *only* petroleum credit card honored under *one* sign in all 48 states . . . and in Canada, too. **The best** retailer policy — TEXACO cooperates with its dealers in the marketing of nationally-advertised and accepted TBA products. **The best** opportunity to cash in on "touring" business — because TEXACO customers at home like to stop at TEXACO stations when on the road. This means you have 38,000 other TEXACO Dealers helping you.

NO QUESTION ABOUT IT, Texaco offers a solid future to good men. Proof: 20,096 Texaco Dealers have been with us more than 10 years, and some for more than 45 years. 683 Distributors have been with us for at least 20 years . . . some more than 45 years.



THE TEXAS COMPANY

IF YOU'D LIKE to grow with Texaco, get in touch with the Texaco Division Office nearest you: Atlanta, Ga.; Boston 16, Mass.; Buffalo 5, N. Y.; Butte, Mont.; Chicago 4, Ill.; Dallas 2, Tex.; Denver 3, Colo.; Houston 2, Tex.; Indianapolis 1, Ind.; Los Angeles 5, Calif.; Minneapolis 3, Minn.; New Orleans 16, La.; New York 17, N. Y.; Norfolk 2, Va.; Seattle 1, Wash.

Then raise front of the car with truck hoist making certain that there is not less than 6 inches clearance between the lower edge of the rear bumper and the ground. Pad tow chains to prevent damage to the bumper.

When towing with rear wheels raised off the ground, raise front end of car. Install support blocks with small groove against rubber compression bumpers on lower suspension arms and large groove encircling shock absorbers.

Lower the front end and then raise the rear end of the car with hoists. Make certain that there is no less than 6 inches clearance between the lower edge of the front bumper and the ground. Tie the steering wheel with the front wheels in a straight ahead position. If car can be towed without being hoisted, do not tow faster than 25 m. p. h. With all wheels on the ground and no air in the suspension system it is permissible to tow or push the car without use of support blocks. Ground clearance is critical under these conditions. Do not attempt to tow the car except on smooth hard pavement. Limit towing speeds to 10 miles per hour.

When lifting an air suspension equipped car on any type of a hoist the air lift control handle should be pulled all the way out. This not only provides more ground clearance to prevent under body damage but also locks out the leveling action; conserves high pressure air. If the leveling system is not locked out, a safety hazard may result because of shifting on a raised hoist as the car attempts to level.

Buick-Rear Axle

A positive-traction differential is now available on all mod-

els. It consists of a new type differential case assembly. All rear axle parts other than the case and its internal parts remain unchanged.

This type of differential results in both rear wheels tending to revolve traction. Caution: When working on a car with a positive-traction differential, never raise one rear wheel and run the engine with the transmission in gear. The driving force to the wheel on the floor may cause the car to move. Special lubricant is required for these units. It should not be mixed with regular lubricants or a severe clutch chatter may result when turning corners. If wrong fluid is accidentally added, it will be necessary to completely clean out all the lubricant. Then refill with special lubricant.

Chevrolet Air Suspension

Non-permanent type anti-freeze is recommended for the level air suspension vaporizer jar. The factory recommends using either denatured or wood alcohol.

The air compressor and generator have a new mounting arrangement. When adjusting the air compressor belt tension, both generator brace attaching bolts must be loosened to prevent over-tensioning the generator belt. After proper compressor belt tension is achieved reset the generator belt tension.

Brakes: Lining area has been increased by 27 percent by making the drums and shoes wider. The increased width projects into the air stream for better cooling. The disk portion of the wheels is cut out to permit air to circulate over the entire outer surface of the brake drum.

Tune-up Data

The 348 cu. in engines use AC

44-N Sparkplugs which are the long reach type. These plugs require gaskets and cannot be interchanged with standard reach plugs. The new vacuum take-off at the intake manifold for distributor vacuum advance on V8 models makes it necessary to disconnect the vacuum advance hose when checking timing on these engines.

The 6-cylinder engine has been modified to give better fuel economy and better oiling to the valve system. A new camshaft and new valve lifters provide the principle means for affecting the rise in fuel economy. A decreased valve lift and a smaller amount of valve overlap not only produces a fuel saving but at the lower and intermediate speeds results in even higher torque than that delivered by the older engine.

New hydraulic lifters have the spring removed from the ball check valve and the cage has been revised to reduce ball travel. Use of lighter valve springs and improved lubrication in the valve rocker section increases valve train durability. By removing the 1/16 inch orifice from the rocker shaft oil delivery passage in the cylinder block and closing of the rocker shaft oil connector tubes spill, the possibility of clogging in the oil delivery circuit has been minimized and the rocker shaft receives full pressure lubrication. A new rear main bearing oil seal is being used on the 283 V8 engines.

The seal replacement is a lot easier because the crankshaft does not have to be removed for insertion of the upper half. Tops of the inlet valve guides are machined and incorporate a new valve stem seal designed to prevent excessive lubrication of the valve and guide. The vacuum distributor advance tube is connected directly to the intake manifold instead of the carburetor. (Continued on page 81)

IT'S BUICK '59: THE CAR EVERYWHERE!

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sales are running 187% higher than in the same period last year

IN DETROIT...



sales are running 143% higher than in the same period last year

IN CHICAGO...



sales are running 190% higher than in the same period last year

IN PHILADELPHIA...



sales are running 133% higher than in the same period last year

IN LOS ANGELES...



sales are running 161% higher than in the same period last year

IN DALLAS...



sales are running 263% higher than in the same period last year

BUICK MOTOR DIVISION, GENERAL MOTORS CORPORATION

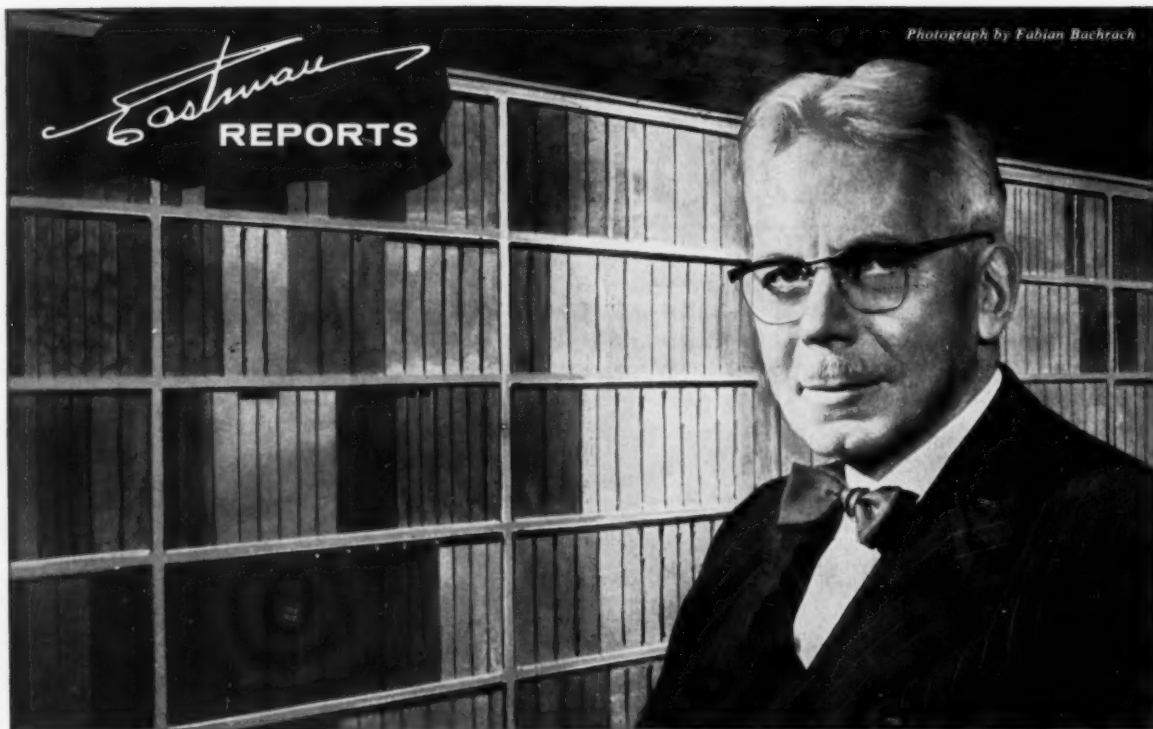
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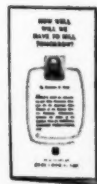


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decisions in the businesses, industries, sciences and professions...pin-pointing the market of your choice.

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CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

*Following are prices at factory for cars with standard equipment as of November 19, 1958
State or local taxes, transportation and finance charges and optional equipment are extra.*

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes		Federal Taxes and Handling Charges		Suggested Price at Factory including Federal Taxes		Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes		Federal Taxes and Handling Charges		Suggested Price at Factory including Federal Taxes		Shipping Weight
	1	2	3	4	5	6			1	2	3	4	5	6	
AMERICAN MOTORS CORP.															
RAMBLER American-6 DeLuxe															
Bus, Sedan, 2d	1662	159	1821	2435											
Sedan, 2d	1675	160	1835	2476											
Sta. Wagon, 2d	1864	176	2060	2554											
Super Sedan, 2d	1754	166	1920	2492											
Sta. Wagon, 2d	1863	182	2145	2570											
Rambler Six DeLuxe															
Sedan, 4d	1918	180	2098	2934											
Sta. Wagon, 4d	2224	203	2427	3068											
Super Hardtop, 4d	2071	197	2268	2961											
Hardtop, 4d	2141	202	2343	2961											
Sta. Wagon, 4d	2345	217	2562	3082											
Custom Sedan, 4d	2178	205	2383	2956											
Sta. Wagon, 4d	2452	225	2677	3067											
Rebel-V8 Del. Sedan, 4d	2039	189	2228	3274											
Sup. Sedan, 4d	2192	206	2398	3287											
Sta. Wagon, 4d	2466	226	2692	3398											
Custom Sedan, 4d	2299	214	2513	3295											
Hardtop, 4d	2369	219	2588	3338											
Sta. Wagon, 4d	2573	234	2807	3407											
Super Sedan, 4d	2369	218	2587	3428											
Sta. Wagon, 4d	2643	238	2881	3546											
Custom Sedan, 4d	2504	226	2732	3437											
Hardtop, 4d	2568	234	2822	3483											
Sta. Wagon, 4d	2778	248	3026	3582											
Hdt. Sta. Wagon	2862	254	3116	3591											
CHRYSLER CORP.															
CHRYSLER Windsor															
Sedan, 4d	2909	230	3139	3800											
Hardtop, 2d	2968	236	3224	3735											
Hardtop, 4d	3047	240	3288	3830											
Convertible	3296	259	3555	3950											
Twn. & Ctry, 2s	3362	264	3626	4045											
Twn. & Ctry, 3s	3536	277	3813	4070											
Saratoga Sedan, 4d	3609	282	3891	4010											
Hardtop, 2d	3665	286	3951	4037											
Hardtop, 4d	3757	292	4029	4070											
New Yorker Sedan, 4d	4020	314	4334	4120											
Hardtop, 4d	4068	318	4386	4080											
Hardtop, 4d	4121	322	4443	4165											
Convertible	4453	347	4800	4270											
Twn. & Ctry, 2s	4553	354	4907	4295											
Twn. & Ctry, 3s	4753	369	5122	4360											
300 Hardtop, 2d	4852	377	5229	4290											
Convertible	5252	407	5659	4350											
DE SOTO															
Fireweed Sedan, 4d	2636	213	2849	3670											
Sportsman, 4d	2895	217	2912	3625											
Sportsman, 4d	2761	222	2983	3700											
Convertible	3018	242	3260	3840											
Sta. Wagon, 2s	3066	245	3311	3950											
Sta. Wagon, 3s	3198	255	3453	3980											
Firestone Sedan, 4d	2923	236	3169	3840											
Hardtop, 2d	3032	244	3276	3795											
Sportsman, 4d	3085	248	3333	3895											
Convertible	3322	266	3588	4015											
Firelight Sedan, 4d	3415	273	3688	3920											
Sportsman, 2d	3478	278	3756	3910											
Sportsman, 4d	3531	282	3813	3950											
Convertible	3777	300	4277	4105											
Sta. Wagon, 2s	3685	305	4141	4170											
Sta. Wagon, 3s	3968	315	4283	4205											
Adventurer Sedan, 2d	4032	320	4352	3980											
Convertible	4331	343	4674	4120											
DODGE															
Coronet 6 Club Sedan, 2d	2283	183	2466	3375											
Sedan, 4d	2349	188	2537	3423											
Lancer, 2d	2402	192	2594	3395											
DODGE, Cont'd															
Coronet V8 Club Sedan, 2d	2395	191	2586	3565											
Sedan, 4d	2461	196	2657	3615											
Lancer, 2d	2514	200	2714	3590											
Lancer, 4d	2556	205	2781	3620											
Convertible	2616	223	3039	3775											
Royal V8 Sedan, 4d	2672	212	2884	3640											
Sedan, 2d	2724	216	2940	3625											
Lancer, 2d	2797	222	3019	3690											
Custom Roy. V8 Lancer, 2d	2820	231	3118	3675											
Sedan, 2d	2993	236	3229	3745											
Convertible	3125	247	3372	3820											
Sta. Wagon															
Sierra, 4d, 2s	2829	224	3053	3940											
Sierra, 4d, 3s	2941	233	3174	4015											
Std. Sier., 4d, 2s	3029	239	3288	3990											
Std. Sier., 4d, 3s	3141	246	3389	4020											
IMPERIAL															
Custom Southampt, 2d	4489	351	4820	4675											
Sedan, 4d	4568	358	4926	4735											
Southampt., 4d	4568	358	4926	4745											
Crown Sedan, 4d	4928	385	5313	4810											
Sedan, 4d	5155	403	5558	4830											
Southampt., 4d	5155	403	5558	4840											
Convertible	5273	411	5684	4850											
Le Baron Sedan, 4d	5570	433	6003	4985											
Southampt., 4d	5570	433	6003	4975											
Limousine	14579	1021	15600	6980											
PLYMOUTH															
Savoy 8 Club Sedan, 2d	2138	214	2382	3390											
Sedan, 4d	2185	217	2402	3425											
Beverly 8 Club Sedan	2264	225	2509	3395											
Sedan, 4d	2331	228	2569	3430											
Hardtop, 2d	2351	230	2581	3465											
Hardtop, 4d	2410	254	2684	3475											
Convertible	2568	246	2814	3580											
Fury 8 Sedan, 4d	2453	238	2691	3485											
Hardtop, 2d	2475	239	2714	3435											
Hardtop, 4d	2526	243	2771	3505											
Suburban 8 Deluxe, 2d, 6p	2456	238	2694	3690											
Deluxe, 4d, 6p	2518	243	2761	3725											
Custom, 2d, 6p	2568	246	2814	3690											
Custom, 4d, 6p	2630	251	2881	3730											
Custom, 4d, 9p	2732	259	2991	3775											
Sport, 4d, 6p	2780	261	3021	3760											
Sport, 4d, 9p	2862	269	3131	3805											
Sgt. Fury 8 Hardtop, 2d	2673	254	2927	3475											
Convertible	2857	268	3125	3670											
FORD MOTOR CO.															
FORD EDSEL Ranger Sedan, 2d	2386	231	2629	3547											
Sedan, 4d	2448	236	2684	3774											
Hardtop, 2d	2453	238	2691	3571											
Hardtop, 4d	2515	241	2756	3682											
Coronet Sedan, 2d	2567	245	2812	3696											
Hardtop, 2d	2573	246	2819	3778											
Hardtop, 4d	2635	250	2885	3709											
Convertible	2807	265	3072	3790											
Sta. Wagon															
Village, 4d, 6p	2715	256	2971	3930											
Villager, 4d, 9p	2792	263	3055	3842											
FORD*															
Custom V8-300 Bus, Tudor	2044	206	2250	3334											
Tudor Sedan	2125	212	2337	3411											
Fordor Sedan	2175	216	2391	3485											
Fairlane V8 Club Sedan	2253	222	2475	3433											
Sedan, 2d	2303	226	2529	3514											
Fairlane 300-V8 Club Sedan	2365	229	2594	3468											
Town Sedan	2415	233	2648	3515											
FORD MOTOR															

* Delivered Prices of 6 cyl. models are \$118 less than the 8 cyl. models.

† 1959 Prices.

* Six cyl. models are \$110 less than the 8 cyl. models

WITH LIVES AT STAKE...



Wagner Lockheed... the best

LOCKHEED BRAKE PARTS, FLUID, EXCHANGE SHOES and LINING • AIR HORNS • AIR BRAKES • TACHOGRAPHS

.. you can't afford to gamble on quality of parts you use!

Be safe...on all brake service jobs...
standardize on

Wagner Lockheed

BRAKE SERVICE PRODUCTS

...a complete replacement line...
safety engineered for maximum protection



Safe brakes protect lives! To turn out the safest possible brake service work—standardize on Wagner Lockheed Brake Parts, Fluid, and Lining. They're tops for quality—and are available for every car, bus, truck or trailer.

WAGNER LOCKHEED BRAKE FLUID is compounded of the finest ingredients—chemically balanced to function efficiently under all driving conditions. It surpasses S.A.E. specifications.

WAGNER LOCKHEED REPLACEMENT BRAKE PARTS are manufactured by the same machinery—to the same specifications—as Wagner parts used for original equipment. Cover every make and model of vehicle, including hard-to-find numbers not easily obtainable elsewhere. Parts available individually or in factory-sealed kits.

WAGNER LOCKHEED BRAKE LINING provides more miles of quick, safe, smooth stops...fewer brake adjustments...less drum wear. Uniform in density, composition, and frictional quality. Available in sets, blocks, rolls, slabs, cut segments and on shoes.

WAGNER EXCHANGE BRAKE SHOE SETS have lining "bonded-on" or "riveted-on" according to highest factory standards. Sets are available for all popular passenger cars and some light trucks with both standard and over-size lining thicknesses.

Mail the coupon for a **FREE** copy of valuable
BRAKE SERVICE MANUAL HU-411.

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Please send us Bulletin HU-411 on Hydraulic Brake Servicing. We understand that there is no charge or obligation.

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ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

JIMMY BRYAN, winner

of 1958 Indianapolis "500," explains . . .

**"Here's how my racing experience
can help your customers get safer
highway driving—plus top economy!"**



**America's top racing driver
tells why you should put
the performance spark plug
in every make of car!**

"I've learned that speed alone doesn't make a winner! Even on the big track at Indianapolis you seldom reach top speed before you come into another curve . . . forcing you to ease off on the throttle again. To win, a driver needs a car that responds instantly — getting up speed again as fast as possible!

"You need this same response and acceleration in passenger cars to get safely out of tight passing spots," says Indianapolis winner Bryan.

"What's this got to do with economy? Plenty! An engine can't deliver instant response unless it's at top efficiency . . . getting all the power out of every drop of gas. And when an engine is at top efficiency, it's also at top economy!"

JIMMY BRYAN won the 1958 Indianapolis "500," and was 3 times National Champion of "big-car" racing, using Champion Spark Plugs for peak engine efficiency.



Stock-car racing proves Champions give best performance in any make of car.

"I don't mean an engine gets its best mileage running wide open. But say that a certain engine isn't properly tuned, and only goes 85 mph at full throttle. Then you tune this engine to *top efficiency*. Top speed increases. To go 85 mph, you don't need *full* throttle. You now go 85 mph on *less* gas.

"This means that — for any given amount of gas coming into the cylinders — the more efficient engine will *deliver more mileage* than the less efficient engine. And that means greater economy!"

Jimmy Bryan — and virtually every other racing driver in America — knows from experience that — when it comes to top spark plug efficiency — it doesn't matter *who* built the engine! Whether it's a Meyer-Drake OFFENHAUSER, or a regular production engine built by Ford, General Motors, Chrysler Corp., American Motors or Studebaker-Packard — *every* engine does its best with *Champion Spark Plugs*. And racing records prove it!

Give your customers the added safety and top economy of peak engine efficiency. Install *Champion Spark Plugs* — in *every* make of car!

RACING RECORDS PROVE CHAMPIONS BEST FOR ALL CARS!

Jimmy Bryan's Champion-sparked Indianapolis win was Champion's 27th Indy victory in 34 starts

This year at Monza, Italy, in the fastest race ever run, winning spark plugs were Champions

At Reading, Pa., hill climb Champion-equipped VOLVO set new class record

Besides Indianapolis victory Champions sparked the winners in 10 out of 10 "big-car" races this year

Champions powered every winner in the 11 major NASCAR stock-car

... races this year . . . 8 CHEVROLETS, 2 FORDS, 1 PONTIAC

From 1953-57, Champion Spark Plugs powered 337 of the 353 NASCAR stock-car race winners . . . including virtually every winning FORD, CHEVROLET, PONTIAC, OLDSMOBILE, MERCURY, DODGE, CHRYSLER, BUICK and HUDSON

AT 1958 PIKES PEAK CLIMB:

New world's record for sports cars set by Champion-sparked CHEVROLET engine

Champion-powered PONTIAC won stock-car contest

New pace-car record set by Champion-equipped CHEVROLET Impala

New record for Indianapolis-type cars set with Champions

AT BONNEVILLE SALT FLATS:

Champion-powered CHRYSLER 300D had top time of all 5 gasoline-powered classes

Supercharged CHRYSLER V8 engine, Champion-sparked, set new Class D modified roadster record

Champion-powered supercharged DODGE roadster set new Class C record

Class C modified sports car record set by THUNDERBIRD with Champions

AMERICA'S FAVORITE—

CHAMPION

SPARK PLUGS

CHAMPION SPARK PLUG COMPANY TOLEDO 1, OHIO





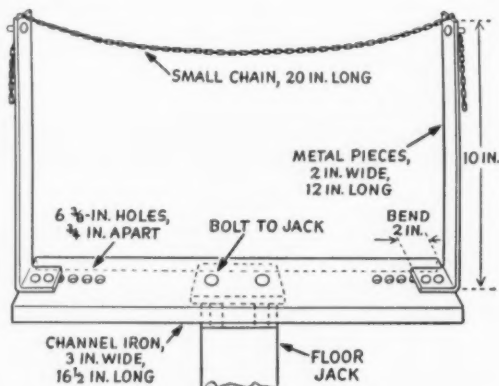
Time and work saving ideas on cars and trucks can pay off. Send Yours In Now!

\$25

FOR THE KINK
OF THE MONTH

\$7.50

PAID FOR
EACH KINK



December's Kink of the Month Is Frame For Removing Transmissions

I HAVE made a frame that bolts to my floor jack for removing any kind of heavy transmission such as hydramatic and other types of transmissions. I take a piece of channel iron and then cut two pieces of metal 12 inches long. Heat and bend both pieces on one end, 2 inches long and drill $\frac{3}{8}$ holes in all four ends. Drill holes $\frac{3}{4}$ inch apart on each end of channel iron for adjustment on different width transmissions. I fasten a chain over top of transmission to steady it. This tool has saved me a lot of hard work and time. *Lee R. Glines, 1324 Lincoln St., Watsonville, Calif.*

Adjusting Tool For 4-Barrel Carburetor

I have made a carburetor adjusting tool for a 1958 Carter 4-barrel carburetor. Take a piece of $\frac{1}{4}$ inch copper tubing 15 inches long and a piece of speedometer cable 16 inches long. Use an old discarded needle seat from a 4-barrel carburetor. Cut down to $\frac{5}{8}$ inches, using $\frac{5}{16}$ inch drill. Use a piece of nail $\frac{3}{16}$ inches long. Solder the nail to the speedometer cable and then solder the nail and cable to the inside of the needle seat. Run the speedometer cable thru the copper tubing and fasten the screw driver handle to the other end of the cable. *Allen Carr, Schnorr Motor Co., 704 Grand Ave., Spencer, Ia.*

Tip Speeds Removal Of Top Starter Bolt

Late Chevrolets with solenoid on starter have very little room to get a wrench on the top starter bolt. We made a clip of $\frac{1}{8}$ x 1 inch strap iron to hold the plunger forward out of the way. This speeded up the job. *Ivo V. Pennington, Wauneta, Nebr.*

(Continued on page 70)

**THIS DRAMATICALLY NEW MOTOR OIL
DOUBLES ENGINE PROTECTION AND AT THE
REGULAR OIL PRICE**



For "Cold Engine"
City Driving

For "Hot Engine"
Highway Driving

The cream of 100%
Pennsylvania Oil Stocks fortified by
an exclusive additive formula

Exclusively formulated to serve the varying engine lubrication needs created by modern driving habits, NEW KENDALL Dual Action MOTOR OIL eliminates cold engine sludge deposits in slow city driving and prevents hot engine varnish build-up during high-speed open highway driving.

It stops harmful corrosion in vital engine parts. It reduces costly engine wear and repair.

Your customers get the dual benefits of greater engine protection and performance at the regular oil price while you enjoy the benefits of greater volume.

**ASK YOUR KENDALL DISTRIBUTOR ABOUT
NEW KENDALL Dual Action MOTOR OIL**

KENDALL REFINING COMPANY, Bradford, Penna.

Lubrication Specialists since 1881

Shop Kinks Continued from page 68

Spark Plug Tubes Used In Handling Of Cyl. Heads

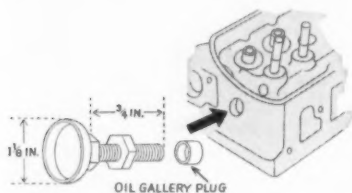
To facilitate handling of Chrysler cylinder heads when performing engine work, I have found that the spark tubes make ideal handles. When removing the valve cover merely slip the rubber gaskets off the tubes and leave them in place. The same procedure applies for installing the heads. *Walter Nolte, 173 Main St., Huntington, N.Y.*

Timing Marks Easy To See With Reflective Paint

Here's a little tip we use in tune-ups. We mark the timing marks on our tune-ups with a dab of reflective yellow paint. Any mechanic who has cussed out these dirty, hidden timing marks will appreciate this suggestion. *Frank Hornejjak, A. & E. Garage, 84 State St., Struthers, Ohio.*

Tool For Installing Oil Gallery Plug

Occasionally the rocker arm oil gallery plug comes out of Pontiac V-8 cylinder heads causing loss of oil pressure to rocker arms. I have devised a simple

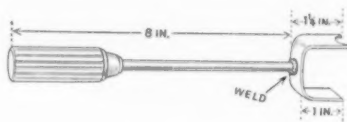


tool for installing a new oil gallery plug without removing the cylinder head. It is made by welding the convex side of a 1 1/8 inch core plug to the head of a 3/16 inch SAE cap screw 3/4 inches long. This plug is then cut so the depth of concave is 1/8 inches. This acts as a locating device and permits pressure on head wall rather than on valve

spring chamber plug. A nut is run on cap screw and new oil gallery plug slipped over end of screw. Backing off nut forces oil gallery plug in place. By reversing this tool it can also be used to remove the valve spring chamber plug. *Cecil R. Huntley, Service Manager, Yager Pontiac, 470 Central Ave., Albany 6, N.Y.*

Tool For Removing Spring Clip On Brakes

Here is a handy tool to remove and replace the spring clip which holds the brake shoes against the backing plate on Chevrolet 1951 to 1958 models. Take a flat piece of steel plate 3/4 inch wide, 2 3/4 inches long and 1/16 inch thick. Bend into horseshoe shape, making one end longer. Grind longer end in a U shape about 1/4 inch back. When using place U shape end at



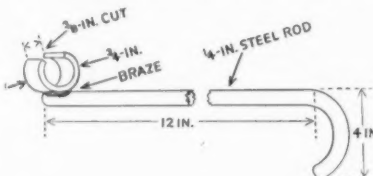
top of spring clip and push and turn. Weld about an 8 inch screwdriver to center of bend. *L. Iacono, 121 West 21st St., Chester, Pa.*

Procedure For Removing Dodge Truck Engines

Here is a short cut for removing Dodge truck engines. We do not remove floor boards or transmission. Instead the engine is separated by removing six bolts holding bell housing to block and the eight nuts holding flywheel to crankshaft. Be sure to mark the flywheel to crankshaft position before disconnecting for correct assembly later. *Stanley Clark, Box 2162, East Bradenton, Fla.*

Tool For Removing Speedometer Cables

In removing and installing speedometer cables on '57 and '58



De Sotos and many other cars, difficulty is encountered in loosening and tightening the ferrule fastening the cable housing to the speedometer gear box. Here is a tool I've found that does the job very easily. The bushing is slipped over the ferrule and the tool arm is moved angularly to bind the ferrule. A slight twist on the tool handle and the ferrule is loosened or tightened. *Edward F. Wisniewski, 234 So. 10th St., Reading, Pa.*

If you have an original idea for a special tool, a short cut on any job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

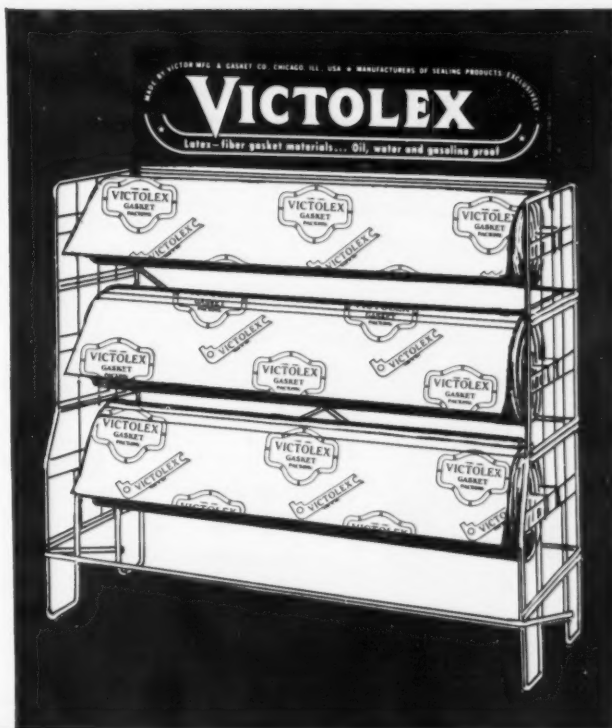
Another VICTOR "First" in Super-Sealing! Victolex Sheet Packing

NEW, improved general-purpose gasket material of cellulose fiber and rubber—replacing Victorite glue-glycerin sheet packings—at no increase in cost to you!

VICTOLEX—made by a patented process—is composed of high-grade cellulose fiber and oil-resistant synthetic rubber binder. It is stronger, tougher and more resilient than all former standards for general-purpose sheet packings. It seals better than any such gasketing you've ever used.

VICTOLEX has excellent sealing characteristics for oil, fuel, water and anti-freeze. It doesn't shrink, stretch, dry out or break down under pressure or heat up to 300° F.—nor does it corrode light metals.

VICTOLEX is easy to handle, cut and shape with ordinary shop tools to any required pattern. Yet **VICTOLEX** costs you no more than less efficient glue-glycerin packings.



**Order VICTOLEX now . . .
from your VICTOR Jobber**

VICTOLEX is available immediately from your Victor Jobber in rolls and sheets. Comes in three thicknesses: $\frac{1}{64}$, $\frac{1}{32}$ and $\frac{1}{16}$ in. Shown are two popular 3-roll assortments for service shops. The sturdy wire storage-service rack is supplied at no added cost with your initial assortment purchase.

3-Roll Assortment (above) 36-in.-wide rolls. Choice of any three:
JV-90— $\frac{1}{64}$ in.—50 yd.; JV-95— $\frac{1}{32}$ in.—25 yd.;
JV-94— $\frac{1}{64}$ in.—25 yd.; JV-92— $\frac{1}{16}$ in.—25 yd.;
JV-91— $\frac{1}{32}$ in.—50 yd.; JV-96— $\frac{1}{16}$ in.—15 yd.

Assortment JV-10 (left) 18-in.-wide rolls. Includes one each:
JV-11— $\frac{1}{64}$ in.—10 yd.; JV-13— $\frac{1}{16}$ in.—5 yd.
JV-12— $\frac{1}{32}$ in.—10 yd.

Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill. Canadian Plant: St. Thomas, Ont.

VICTOR

Sealing Products Exclusively

GASKETS • OIL SEALS • PACKINGS

The 100% Coverage Line . . . for Cars, Trucks, Tractors, Stationary Engines

Worth a Trial

It should be noted that this is no reckless, half-baked device to louse up established practice and open the gate for wild scoring. The privilege of receiving the kick-off is no guarantee that a score will result, and there is a safety factor in the provision requiring an eight-point differ-

ence in scores (or a nine-point difference in college, probably) before the old order changeth.

Chances are coaches would oppose such a change. They oppose most changes. They would holler that the lawmakers were making football a game of put-and-take and were penalizing the better team.

Still, if it made for livelier entertainment, which it might do, the net result would be on the profit side. "Profit," of course, is a word employed only in the hearing of professionals. The colleges still refuse to admit that they're in the entertainment business, though it has been a long time since they successfully pretended that football had any connection with education.

The feeling here is that Mr. Talbot's proposal is worth a trial. Chances are it would have little effect on the outcome of games. Certainly, it would never enable a poor team to beat a good team. Yet if it helped at all to narrow the point spread between poorly matched teams, if it kept alive the possibility of a laggard catching up, it would serve its purpose.

Slaves of Time

As long as we're playing fast and loose with the rules, now is as good a time as any to plump for another idea that has been brought up from time to time over the years—the idea of disqualifying the clock as football's court of last appeal.

There is no good reason why a football game should end after sixty minutes of timed action and inaction. A championship fight goes fifteen rounds. A baseball game goes nine innings. A golf match is eighteen or thirty-

Food for thought is the only kind that hasn't been effected by the high cost of living.

six holes. Some games like soccer or hockey or basketball or polo must be clocked because there is no other way of measuring them.

This isn't so of football. On five minutes' notice, statisticians could come up with figures showing how many plays a pair of live teams ought to run in any game or in any quarter of a game. There is no reason at all why a game couldn't be meas-
(Continued on page 74)





"E" Series HRC* CUPS
WITH EXPANDERS
Creates a Positive Seal!

*Heat Resisting Compound



That's why they're better — that's why they last longer — that's why you should use "E" Series Cups on all jobs! And remember — cups with expanders are used in America's highest priced cars!

EIS Wheel Cylinder Kits come with "E" Series Cups and they cost no more than most kits with plain cups. All EIS Wheel Cylinders are equipped with "E" Series or patented Ribbed Cups where applicable — at no extra charge! All EIS Master Cylinders and Kits come with Ribbed Secondary Cups — extra value at no extra cost!

ORDER THIS HANDY A222 "E" SERIES CUP AND EXPANDER ASSORTMENT

Write for Catalog

EIS AUTOMOTIVE CORP., Middletown, Conn.

Tow Truck Continued from page 43

Stine later on when repairs are needed. This has been a helpful factor in gaining many new customers for him.

"In the majority of cases, the trucks that we tow are located in or near York, Pa.," explains Stine. "This means that we have an excellent opportunity of introducing our repair shop to these truckers, regardless of whether they are individually operated or are part of a fleet. In any case, we have found that two out of every three trucks that we tow sooner or later call upon us for motor and mechanical needs. Besides enjoying income through our towing services, we have built up goodwill for our shop."

As an additional service and convenience to fleet operators, Stine has a tractor that he uses for bringing in trailers when brake service is needed. In his experience, he has found that many fleet owners neglect the trailers requiring brake service. Generally, because they do not have a tractor to tow them at the moment, or because the tractors are elsewhere.

By having his own tractor, Stine has been able to bring in trailers whenever brake service is needed, and this has become very popular with his many customers.

"We bring in between five and six trailers weekly for brake work," explains Stine, "which ordinarily we wouldn't have if we didn't have our own tractor. In nine cases out of ten, the fleet operator will send his own tractor to take the trailer after the job has been done. If he doesn't, we will gladly deliver it for him."

Stine has been using his tow trucks and tractor as a business attraction and advertisement when soliciting work from truckers and fleet operators.

These two features are in addition to his many other services and are something that other competitive shops do not offer. From time to time, passenger car owners, truckers and fleet operators require towing and if Stine does it, they also remember him when they need repairs. His tractor also brings in work

that ordinarily might not have been brought in.

Stine has a reputation in York, Pa., for doing excellent work on all jobs. He feels that he has obtained this reputation because he does a complete job, not a partial one. Take for example any brake job that is handled by him. In better than 50 per cent of the cases, he finds that the drums require turning. In 80 per cent of the cases, the wheel cylinders need servicing.

Herbrand!

THE GREATEST NAME IN HAND

TOOLS FOR 77 YEARS — PROUDLY INTRODUCES —

Vi-Chrome

— a great new line of popular priced mechanics hand tools. Vi-Chrome socket and wrench sets combine professional design, high quality and all the most necessary items at *low, low cost!*

See the beautiful new Vi-Chrome display at your Herbrand wholesalers today!

THE COMPLETE Herbrand FAMILY!

- HERBRAND TOOLS
- "TUNE-UP" EQUIPMENT
- DIAMOND "H" TWIST DRILLS
- AUTOMATIC TRANSMISSION TOOLS
- SPECIAL PURPOSE TOOLS
- FOR EVERY JOB
- "B" LINE MECHANICS' CHESTS
- BOXES & ROLLER CABINETS
- AND NOW! VI-CHROME TOOLS!

Herbrand offers all of these fine lines through one source of supply! All backed by one factory—sound policies—franchise agreements. Immediate availability from leading automotive warehouse distributors everywhere!

Write today for complete information on Vi-Chrome and the entire line of Herbrand products—ask for the family folder No. HF-59.



Herbrand

DIVISION

THE BINGHAM-HERBRAND CORPORATION • FREMONT, OHIO

Tune-up and Volume . . . Continued from page 21

isn't a sales talk that keeps them satisfied. It's performance."

Anderson figures it will take him 10 to 12 months to get his investment back. That's in actual dollars and cents. But along with the money, he will have been building an enviable reputation.

Anderson does a high volume of business. Yet Anderson will

never push a customer away, with the excuse he's snowed under. One way or another, Andy will help that motorist out of trouble. Even though it means going far out of his way.

"With this new testing equipment," said Anderson, "we are in a better position to service more customers. At the same time, give them a better job."







Fine quality Reversible Ratchet Hex Wrenches. Tempered, plated. Also in Sets.

Sizes:

- No. 61: 1/4-3/16"
- No. 62: 3/8-7/16"
- No. 63: 1/2-9/16"
- No. 65: 5/8-3/4"
- No. 66: 1 1/4-7/8"



HEAVY DUTY Compressor. Speeds valve jobs on BIG bus, truck, tractor engines (L-head, valve-in-head). 3 prs. jaws plus adjustable plunger bar permit servicing longest, shortest valves. K-D No. 325.



SAFE, EASY battery handling. Quick acting screw with T-handle for fast operation. Grips securely for tilting, maneuvering in tight places. K-D No. 140.



For all widths of popular 6 and 12 volt batteries.

Standard Size



Long Size



LOW PRICED

UNIVERSAL Cylinder Head Holder. Holds all sizes, rotates to any position for cleaning, servicing valves. For GM, Ford, Chrysler-built, plus others. K-D No. 175.

K-D TOOLS

Free Catalog, over 150 Tools. K-D Mfg. Co., Lancaster, Pa.

Body Frame

Continued from page 40

a small hydraulic cylinder and pump to extend the telescoping member of the beam, and chains and hooks for attaching.

In addition to the traction exerted by extending the telescoping member of the beam, a much greater pull can be exerted by lowering the beam slightly after attachments have been made. This is done so that the suspended car, tending to pull into a straight line with the beam, is drawn out by the straightening force.

The bent structure in most cases will be pulled back into alignment by the simple combination of centrifugal, radial, and an extensible action. Unitized body structures present no more difficulty to straighten either.

Sports Page


Continued from page 72

ured by so many plays a quarter, rather than so many minutes.

There would then be no more of this nonsense about stopping the clock or running out the clock. Then the dial over the scoreboard would show not how much time remained but how many plays remained. Strategy wouldn't change much, but a lot of sharp practice would be eliminated.

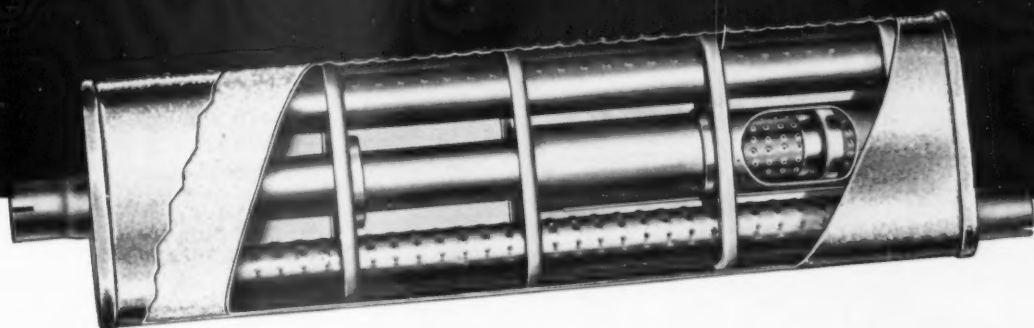
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Chilton's MOTOR AGE, DECEMBER, 1958



K-D Tools are built to last. In shops all over the nation you'll find K-D 380 Compressors still in daily use after 25 years service! See your Jobber.

coated steels,
heavier steels,
anti-rust design
on 3 out of 4
MERIT mufflers



That's why MERIT outlasts them all

Here are premium-quality muffler features at no extra cost. They will help you prove to your customers that Merit gives longer service and better performance.

ANTI-RUST DESIGN New scientific principle of even heat diffusion. Constant even flow of hot exhaust gases sweeps dry every muffler chamber. Corrosive moisture is sharply reduced—a big reason why Merit lasts so much longer!

HEAVIER STEELS Merit oval shells are 33% thicker—.048 in., compared with only .036 in. on competitive mufflers. Outer heads are up to 67% thicker, too. Merit mufflers are almost invariably pounds heavier than competition—up to 45% heavier!

COATED STEELS All Merit mufflers for 1955 or later models, plus many older ones, have this extra-life feature. Coating on two sides gives double protection against corrosion. And there's 33% more steel as well—no wonder Merit outlasts them all!

MERIT DEALER SIGN Big curb sign works for you 24 hours a day! Height, 6 ft. 3 in.; width, 4 ft. Two-sided. Four colors in high-gloss enamel. Low price includes free panel (atop sign) with choice of messages.



Make your move to

MERIT

now

MUFFLERS AND PIPES

Dept. 15-M, 619 Smith St., Toledo 1, Ohio

Know the Law Continued from page 28

nonsuit at the behest of the oil company on the ground that the evidence was insufficient as a matter of law to authorize a verdict in favor of Ray.

Ray brought error. The Court of Appeals of Georgia reversed the decision of the lower court. The Court of Appeals declared: "... the evidence presented an

issue of fact for determination by the jury, as to whether the defendants (the oil company and Burton) were negligent in raising the automobile by means of the hoisting machine without warning to the plaintiff (Ray)."

A SIMILAR case in some respects, but with a different

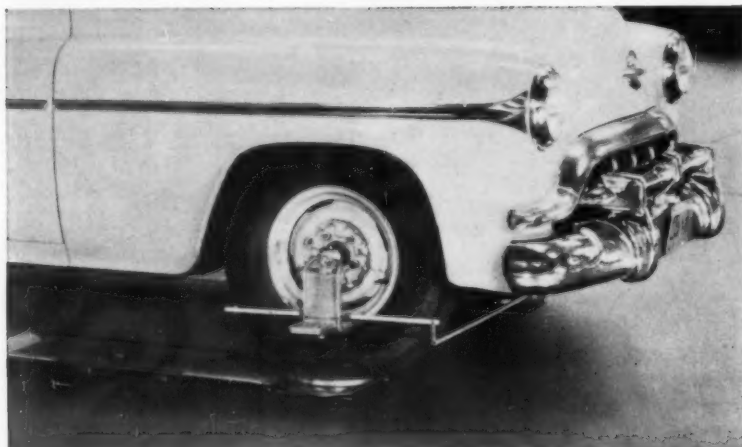
result legally, is that of Davis vs. Phillips Petroleum Company. This case was decided by the Court of Civil Appeals of Texas.

N. C. Davis drove his automobile to a service station in Turkey, Texas, to have the radiator filled with water. Also to get gas and to have a change of oil. After Davis' car was serviced with water and gas, the station manager directed him to drive his car on to a hydraulic lift for the oil change. After stopping his car on the lift, Davis got out, stood on the frame of the lift, which was 10 inches above the cement floor. Davis began cleaning his windshield. While so engaged, the manager, with noiseless machinery, hoisted the hydraulic lift with Davis and his car to height of six feet.

Davis did not know that the lift had been hoisted. While the car was elevated on the lift, he got out, fell to the cement floor and suffered serious injuries.

Davis contended that it was the duty of the oil company,

WEAVER takes the guesswork out of wheel alignment



Model WJ-125 checks alignment on all passenger cars and light trucks



WJ-54 Alignment Equipment Display Stand illustrated above is not included with WJ-125 Outfit, but may be ordered separately.

Here is a low-priced alignment checking outfit specially planned for those shops wanting to start an alignment department. Additional equipment can be purchased as income justifies the additions.

The simplicity of operation and unrivaled accuracy of this equipment assures complete customer satisfaction. Fast operating Gauges give accurate readings for Camber, King-Pin Inclination, Caster and toe — all measured from the spindles. Turning radius is checked by floor level Gauges.

WJ-125 OUTFIT CONSISTS OF
Two 3-Way Alignment Gauges
One Pair of Turning Radius Gauges
One Tru-Way Toe Gauge
One Portable Alignment Tester

For details on this and other Wheel Alignment Outfits consult your Weaver jobber or write us for Bulletin MA-486.



Weaver Manufacturing Co., Springfield, Illinois, U.S.A.

SERVICE SHOP EQUIPMENT

Complete line includes: . . . Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on, Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . Car Washers . . . and Air Compressors.



through its station manager, to notify him of its intention to hoist the lift on which he was standing and notify him of the danger. The District Court of Hall County, Texas, dismissed the suit. Davis appealed. The Court of Civil Appeals of Texas affirmed the judgment of the trial court.

The Court of Civil Appeals

stated: "... appellant (Davis) knew he was driving on to the hydraulic lift to have the oil in his car changed. He does not claim this should have been done without hoisting the car or that he did not know that the car would be hoisted by the lift for that purpose. He alleges no mental incapacity, inexperience, defective senses or sensibilities, or ignorance of the hydraulic lift or its operation that would charge appellees (the oil company and its station manager) with a degree of care greater than was due any person of ordinary prudence, and in our opinion the allegations . . . do not show actionable negligence against the appellees."

The Ray and Davis decisions, although apparently contradictory, can be easily reconciled. In the former case Ray was inside the car leaning over, with his head below window level. In the latter case Davis was outside the car standing on the frame of the hydraulic lift. It would seem to be good practice for a service station to have a sign warning of the danger of hoisting machinery. Also for the station agent to prohibit a customer from remaining in or about his car while it is being hoisted.

People who criticize others for their failures also fail to reach their goal in life.

Automatic Transmission

Continued from page 27

the goodwill and confidence we build by the practice."

Jobs Quoted on Flat Rate Basis

All automatic transmission jobs are quoted to the customer on a flat-rate basis, as are all other major service operations.

Mechanics draw a commission of 60 per cent rather than the customary 50 per cent. Thompson declares that this policy has been a real factor in building the business.

"We pay more commission," he explains, "because we not only want our men to make better-than-average income but because we want them to make it without hurry and carelessness. When they draw a higher percentage, they're more inclined to take their time and do a more careful job."

Thompson uses a modest amount of local newspaper advertising, using small space fre-

quently rather than an occasional "splash"; but his most outstanding "prestige" advertising is an attractive poster board on the busiest highway leading into the city. He figures every car owner in town uses this highway several times a month, exposing him to this attractive outdoor advertising. The design is such as to build prestige and distinction, rather than to sell any specific service.

**"\$18,000
my first 9 months
SERVICING
RADIATORS!"**

— Harvey C. Jones Co., Reseda, Calif.



Harvey Jones says: "The radiator business was new to me until I opened my shop. During the first 9 months I grossed \$18,000! I feel this was due to the excellence of my Inland equipment—plus the thorough instruction and sales aids received at your school!"

Hank Konter, Newcastle, Wyo., grossed \$7,108 the first year!

Poteau Motors, Poteau, Okla., made \$1,500 in 3 months!

Douthitt-Carroll-San Chez Co., Memphis, Tenn., averages \$300 a week!

Sidney Glass & Rad. Shop, Sidney, Mont., grossed \$10,784 in a year!

WANT EXTRA PROFITS? There's a real radiator-servicing opportunity in your area right now—growing every month. Every auto-truck-tractor owner is a prospect. Modern cooling-system pressures now are so great that radiators require more frequent servicing.

GET THE FACTS from Inland, world's largest radiator servicing equipment mfr. Inland offers the industry's newest and finest equipment. Inland's purchase plan makes the equipment easy to own, it soon pays for itself. Inland trains you or your man quickly, provides you with proved merchandising and selling aids. For complete information, mail the coupon.

MAIL TODAY

New free 48-page book, "Blueprint for Profits," tells about many making an EXTRA \$8,000 to \$15,000 a year servicing radiators. Complete with illustrations, descriptions and prices of required equipment. Popular "Pays-For-Itself" purchase plan. Invest a minute to mail the coupon—the rewards can be amazing! Send today!

INLAND MFG. CO., 1108 Jackson St.

Dept. MA-12, Omaha 2, Nebr.

"SOLD EXCLUSIVELY BY MAIL"

INLAND MFG. CO., Dept. MA-12
1108 Jackson St., Omaha 2, Nebr.
Please send new free book, "Blueprint for Profits."

FIRM _____
(PLEASE PRINT)

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If dealer, make of car sold _____
Are you now operating a radiator dept.? ☐ Yes ☐ No



FROM GENERAL MOTORS —

New highs in

The mile has not shrunk . . . and a gallon is still a gallon. But new 1959 General Motors cars make every trip seem shorter. And every gallon of gasoline does a lot more work.

One important reason is the new Rochester-GM Carburetor, engineered by General Motors for exclusive use on GM cars.

Here, at the General Motors Technical Center and at Rochester, new ideas of carburetion are constantly considered. Once they have been proven successful through thousands of rugged test miles, they immediately become regular features of Rochester-GM Carburetors.

This constant research and testing results in a carburetor that's ideally suited to the particular engine with which it is teamed. Better performance and better economy are direct results.

Rochester-GM Carburetors are original equipment on the new Cadillac, Buick, Oldsmobile, Pontiac and Chevrolet. And Rochester-GM Carburetors and parts are available everywhere as the top-quality replacement carburetor. *Rochester Products Division of General Motors, Rochester, New York.*

AMERICA'S NUMBER ONE
CARBURETOR
goes prospecting for you in

The Saturday Evening

POST

telling 23,200,000 automotive-minded readers

AMERICA'S NUMBER ONE
PERFORMANCE AND ECONOMY STORY

**carburetor efficiency
shorten every highway,
stretch every gallon !**



**America's
number one
original equipment
carburetors**

ROCHESTER CARBURETORS





W. J. Spear, president of Spear Motor Sales, Chardon, Ohio, switched to De Soto because—

“The Firesweep makes De Soto a good line in any size town”

“I switched to De Soto because it gives you the wide price coverage you need in a town the size of Chardon,” says Mr. Spear.

“The folks here want quality in everything they buy, especially now with better prices for farm products—and they sure get quality with De Soto. But they’re Yankee-shrewd, too. And that’s where De Soto’s price coverage has really paid off for me.

“At the top of the line, De Soto offers all the luxury anybody could ask for. De Soto also offers the lower-priced Firesweep—just the thing for the

man who wants the extra luxury of a medium-price car, without getting into the top price class. I’d say that 53% of all the De Sotos we’ve sold so far have been Firesweeps.

“Right now, we have 19% penetration in our price class here. The response to the ’59 line has been nothing short of terrific, so we’re looking to make it even higher in the future.

“I certainly would recommend a De Soto deal to any man anxious to be a successful car dealer—outside my county, that is!”

IT PAYS TO BE A

DE SOTO DEALER!

Servicing '59 Cars Continued from page 60

retor throttle body. With the full manifold vacuum, spark advance at idle is increased.

This results in a faster burn rate, and less heat to be dissipated through the cooling-system. This vacuum advance hose must be disconnected when setting timing. The pistons in the 348 cu. engines are modified for increased compression ratio of 11 to 1.

This was done by eliminating the gabled roof in the piston. A small notch in the piston for exhaust valve clearance and large cut out for inlet valve clearance were added. Pistons are installed with the piston pin off-set in both banks towards center of the engine. A special high performance camshaft is used in combination with mechanical lifters. The recommended valve lash with engine running and hot is .012 in. inlet and .018 in. on the exhaust.

The battery charging circuit is now separate from the generator-to-load circuit. The two individual circuits are both taken of the voltage and current regulator. In this system the line from the hot terminal of the starter to the load is eliminated. Exceptions to this system are found in cars having power operated windows, seats or convertible tops.

A new series wound starting motor is used on all engines except the 348 cu. engine. The 348 cu. engine uses a more powerful compound type starting motor. When replacing a starter motor the more powerful compound motor must always be used on the 348 cu. engine. The compound motor and the series motor have the same external dimensions, therefore always refer to the part number stamped on the casting.

The oil drain plug is eliminated from the transmission

pan. To drain the fluid it will now be necessary to remove the filler pipe. A new reverse band adjustment procedure is now recommended for the power glide transmission. The reverse band adjusting screw should be tightened to 60-80 inch pounds and then backed off 2½ turns. This adjustment procedure should be used on all past model

power glide transmissions also. The waved clutch driven plates, steel, are now reversible, so that they may be installed in either direction and still nest properly. The heater is now located in a different spot and the removal and replacement procedure has been changed. The motor is mounted on the extreme right side of the cowl and it is necessary to remove the complete right hood hinge to remove the heater motor.



ANNOUNCING

ALLOY-COATED STEEL construction

For Prolonged
Muffler Life!

another
important **FIRST**

SPORTSMAN

The ORIGINAL
FIBERGLAS PACKED MUFFLER

SPORTSMAN mufflers were introduced more than six years ago to fill the need for a high performance muffler with a pleasing low tone. Since then, SPORTSMAN has been accepted by the public . . . and widely imitated by the industry. However, in the past six years, gasoline octane has skyrocketed and exhaust condensation acidity has increased by about 50%. To meet these new problems, Haviland is now the first to offer a Fiberglass packed muffler with

PROTECTALOY

PROTECTALOY is an alloy coated steel which will resist corrosion twice as effectively as ordinary uncoated steels. PROTECTALOY is used on SPORTSMAN shells and heads, giving corrosion protection both inside and out. PROTECTALOY, plus the proven design and construction features of SPORTSMAN, will bring you profitable new sales.

MORE THAN A QUARTER CENTURY
OF MUFFLER MANUFACTURING PROGRESS.

Write Department 11 for details.

ARNOLD HAVILAND COMPANY • Defiance, Ohio

For a tight grip
in tight places...



The "Mighty Midget"

CHAN NEL LOCK

No. 424

This "mighty midget" is a natural for a tight grip on small work in hard-to-get-at places. Only 4-1/2" long... drop forged from high grade steel. Four exclusive Channellock precision grooved jaw adjustments... capacity to 1/2". Skilled mechanics say it's one of the handiest pliers in their kits. You'll say so, too!

**CHAMPION DEARMENT
TOOL COMPANY**

MEADVILLE, PENNSYLVANIA

ASK YOUR TOOL SUPPLIER
FOR A CHANNELLOCK No. 424



Be sure it's a genuine CHANNELLOCK
Look for the trademark on the handle

Calendar of Coming Events

General

Jan. 17-25—1959 Chicago Automobile Show, International Amphitheatre.

Feb. 2-4—Automotive Accessories Manufacturers of America exposition, New York Coliseum, New York City.

Feb. 15-16—Automotive Affiliated Representatives officers meeting, Pick-Congress Hotel, Chicago.

Feb. 15-17—National Standard Parts Assn. National Convention, Sherman Hotel, Chicago.

Feb. 15-17—Motor and Equipment Wholesalers Assn. National Convention, Conrad Hilton Hotel, Chicago, Ill.

Feb. 16—Automotive Booster Clubs International board of governors meeting, Conrad Hilton Hotel, Chicago.

Feb. 17—Automotive Affiliated Representatives board of directors and membership meeting, Pick-Congress Hotel, Chicago.

Feb. 18—Automotive Booster Clubs International banquet, Conrad Hilton Hotel, Chicago.

Feb. 18-21—International Automotive Service Industries Show, Navy Pier, Chicago.

Feb. 26-27—American Petroleum Institute, Div. of Marketing, Lubrication Committee meeting, Sheraton-Cadillac Hotel, Detroit.

Feb. 27-March 8—1959 World Wide Auto Show, Miami Beach Exhibition Hall, Miami Beach, Florida.

March 4-8—Ninth Annual National Autorama, State Armory, Hartford, Conn.

March 12-15—Pacific Automotive Show, San Francisco Civic Auditorium, San Francisco.

May 3-8—Top Management Institute, Motor and Equipment Wholesalers Assn. Allerton House, University of Illinois, Monticello, Ill.

May 4-6—American Petroleum Institute, Div. of Marketing, Lubrication Committee meeting, San Marcos Hotel, Chandler, Ariz.

May 17-20—Automotive Engine Rebuilders Assn. convention, Royal York Hotel, Toronto, Ontario.

May 27-29—American Petroleum Institute, Div. of Marketing, midyear meeting, The Savery, Des Moines.

June 24-27—The National IGOA convention, Denver Albany Hotel, Denver, Colorado.

Dealers Convention

Jan. 31-Feb. 4—National Automobile Dealers Assn., Chicago.

Gabriel

SHOCK ABSORBERS

THE GABRIEL COMPANY
CLEVELAND 15, OHIO

Classified Advertisements

SALES CAREER: Nation-wide automotive parts mfg.-distributor offers depression-proof sales opportunity. Protected territories with established accounts now available. Average earnings \$8,000 to \$10,000 per year. Great opportunities for advancement to executive positions. Write today giving background & sales experience. Box 8, MOTOR AGE, 5601 Chestnut St., Philadelphia 39, Pa.

HOLIDAY IN ENGLAND offered by Garage Proprietor in exchange for similar accommodation by an American Operator. Please write R. H. Richard, Ramsden Heath Garage, Billericay, Essex, England.

Buy Bonds



Circle 360 On Inquiry Card, page 53

NEW AND BETTER!
JOB-DESIGNED TOOLS
by **KEN-TOOL**

FLANGE TYPE REAR AXLE PULLER

For all standard wheel pullers. Delivers powerful blow to drive out the tightest shaft on late model cars.

P-60

A MUST FOR ALL LATE MODEL CARS!

NEW UNIVERSAL DRAIN WRENCH

7-way wrench, including TWO 5/16" hex for late-model Chrysler cars.



G-13

TOOL BATTERY KIT

B-26, Post cleaner-cable spreader and cleaner. B-207, chrome-nickel battery pliers. B-24, Forged terminal clamp puller. Separately or in plastic carrying pack.



B-26 B-207 B-24

KEN-TOOL MFG. CO.
AKRON 5, OHIO

Chilton's MOTOR AGE, DECEMBER, 1958



Give your customers **FACTS...NOT FICTION!**

FIND IT!

The clue is in the way you trouble-shoot. Customers want a ring of authority when you diagnose motor trouble. Clevite helps you find it . . . and find it fast. The answer is on the new Wall Chart.

FIX IT!

When it's bearing wear, the solution is simple—Monmouth Engine Bearings. Their superior surface behavior, fatigue strength and corrosion resistance assure the finished, satisfactory jobs you and your customers need.

PROVE IT!

You can . . . and you have this new Monmouth Wall Chart to help justify your own good workmanship and judgment. It tells you the facts . . . everything you need to *know* and *apply* . . . cause of bearing failure, effect and remedy. It's accurate . . . authentic . . . convincing and conclusive . . . truly a great sales and confidence builder.

Get in NOW—by getting in touch with your nearest N.A.P.A. jobber and asking him about Monmouth quality bearings.

Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

Cleveland Graphite Bronze
Division of Clevite Corporation
Cleveland 3, Ohio



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation



ADVERTISERS' INDEX

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A

- AC Spark Plug (Electronics Div.) 10 thru 13
Agency—D. P. Brother & Co.
AP Parts Corp.
Agency—Gray & Rogers
Albertson & Co., Inc.
Agency—Stevenson & Assoc.
Alondra Sales, Inc.
Agency—Larry Raymond Co.
Aluminum Industries, Inc.
Agency—Applegate Advg.
American Telephone & Telegraph Co.
Agency—Cunningham & Walsh, Inc.
Ammco Tools, Inc.
Agency—Arthur R. Mogge, Inc.
Armstrong Rubber Co.
Agency—Lennen & Newell, Inc.
Aro Equipment Co.
Agency—Beeson-Reichert, Inc.

B

- Bar's Products Supply, Inc.
Agency—George I. Lynn
Bendix Aviation Corp.
Eclipse Machine Div.
Products Div.
Agency—MacManus, John & Adams
Bingham-Herbrand Corp. 73
Agency—Slayton-Racine, Inc.
Black & Decker Mfg. Co.
Agency—Van Sant, Dugdale & Co., Inc.
Bosch Corp., Robert
Agency—E. T. Howard Co., Inc.
Breeze Corp.
Agency—Burke, Dowling, Adams, Inc.
Buick Motor Div. G.M. 61
Agency—McCann-Erickson, Inc.

C

- Carter Carburetor Div.
Agency—French & Shields, Inc.
Champion De Arment Tool Co. 82
Agency—Davies & McKinney
Champion Spark Plug Co. 66-67
Agency—J. Walter Thompson Co.
Chevrolet Div. G.M. Corp. 8
Agency—Campbell-Ewald Co.
Chrysler Corp. (De Soto Div.) ... 80
Agency—Batten, Barton, Durstine & Osborn, Inc.
Chrysler Motors Corp. (Mopar Div.) 14
Agency—N. W. Ayer & Son, Inc.
Classified Advertisements 82
Clevis Service Div. 83
Agency—Duffy, McClure & Wilder, Inc.
Commercial Credit Corp. 2
Agency—Van Sant, Dugdale & Co., Inc.
Commercial Solvents Corp.
Agency—Fuller & Smith & Ross, Inc.
Cordomatic Div.
Agency—Arndt-Preston-Chapin-Lamb & Keen, Inc.
Crown Controls Co., Inc. 4
Agency—Graphic Studios of Advg.

D

- Dana Corp. 4
Agency—Allman Co.
Dayton Rubber Co. (Automotive Wholesalers Div.)
Agency—The Allman Co.
Delco Remy Div. G.M. Corp.
Agency—Campbell-Ewald Co.
DeSoto Div. Chrysler Corp. 80
Agency—Batten, Barton, Durstine & Osborn, Inc.
DeVilbiss Co.
Agency—Brooke, Smith, French & Dorrance, Inc.
Du Pont de Nemours Co., Inc.
Cooling System
Refinish Div. 3rd Cover
Agency—Batten, Barton, Durstine & Osborn, Inc.

E

- Echlin Mfg. Co.
Agency—Humbert & Jones, Inc.
Eis Automotive Corp. 72
Agency—The Furman Co.
Electric Auto-Lite Co.
Agency—Grant Advg., Inc.
Exide Div., Electric Storage Battery Co.
Agency—Batten, Barton, Durstine & Osborn, Inc.

F

- Felt Products Mfg. Co.
Agency—Hanson & Stevens, Inc.

G

- Gabriel Co. 82
Agency—Keeling & Co., Inc.
Gates Rubber Co.
Agency—Harold Walter Clark, Inc.
General Electric Co.
Agency—Batten, Barton, Durstine & Osborn, Inc.
Grey-Rock Div. Raybestos-Manhattan, Inc.
Agency—Gray & Rogers
Groboski Industries, Inc.
Agency—Harry F. Port

H

- Haviland Co., Arnold 81
Agency—Seibert Advg. Service
Heli-Coil Corp.
Agency—O. S. Tyson & Co.
Hygrade Products Div. 1
Agency—Friend, Reiss Co.

I

- Ingersoll-Rand Co.
Agency—Beaumont, Heller & Sperling, Inc.
Inland Mfg. Co. 77
Agency—Bozell & Jacobs

J

- Johnson Products, Inc.
Agency—Jaqua Co.

K

- K-D Mfg. Co. 74
Agency—Andes Advg.
Ken Tool Mfg. Co. 82
Agency—Norman Malone Asso.
Kendall Refining Co. 69
Agency—Barber & Drullard, Inc.

L

- Lamson & Sessions
Agency—John B. Hickox, Inc.
Lee Co., K.O.
Agency—Acme Advg.
Lee Filter Corp.
Agency—The Furman Co.
Link Belt Co.
Agency—Klau-Van Pietersom-Dunlap, Inc.

M

- McQuay-Norris Mfg. Co.
Agency—D'Arcy Advg. Co.
Merit Muffler Div., Goerlich's Inc. 75
Agency—Gray & Rogers
Monroe Auto Equipment Co.
Agency—Aitkin-Kynett Co.
Moog Industries, Inc.
Agency—Winus-Brandon Co.

N

- National Business Publications, Inc. 62

O

- Oberhausen Engineering Corp. 85
Agency—Middlebrooks Advg.
Oldsmobile Div. G.M. Corp.
Agency—D. P. Brother & Co.
Olin Mathieson Chemical Corp.
Agency—Van Sant, Dugdale & Co., Inc.

P

- P & D Mfg. Co., Inc.
Agency—La Porte & Austin, Inc.
Perfect Circle Corp. 2nd Cover
Agency—Henri, Hurst & McDonald, Inc.
Pittsburgh Plate Glass Co.
Agency—Batten, Barton, Durstine & Osborn, Inc.

R

- Raybestos Div. Raybestos-Manhattan, Inc.
Agency—Gray & Rogers
Rochester Products Div. 78-79
Agency—D. P. Brother & Co.

S

- Schrader's Son, A. 3
Agency—G. M. Bosford Co.
Standard Motor Products, Inc. ... 1
Agency—Friend Reiss Co.
Stewart Warner Corp.
(Instrument Div.)
Agency—MacFarland, Aveyard & Co.
Sun Oil Co. 16
Agency—William Estey Co.

T

- Texas Co. 58-59
Agency—Cunningham & Walsh, Inc.
Thermoid Co. Back Cover
Agency—Aitkin-Kynett Co.
Timken Roller Bearing Co.
Agency—Batten, Barton, Durstine & Osborn, Inc.
Tung-Sol Electric, Inc.
Electroswitch Flasher Div. 6
Agency—E. M. Freystadt Assoc., Inc.

U

- United Motors Service Div. G. M. Corp. 9
Agency—Campbell-Ewald Co.

V

- Victor Mfg. & Gasket Co. 71
Agency—Buchen Co.
Volkswagen of America, Inc.
Agency—J. M. Mathes, Inc.

W

- Wagner Electric Corp. 64-65
Agency—Arthur R. Mogge, Inc.
Walker Marketing Co.
Agency—Aitkin-Kynett Co.
Wayne Pump Co.
Agency—A. E. Aldridge Assoc.
Weaver Mfg. Co. 76
Agency—Arthur R. Mogge, Inc.
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Agency—Aitkin-Kynett Co.
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Did you know—? 80.7 per cent of—

MOTOR AGE Readers find helpful ideas in articles.

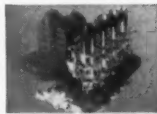
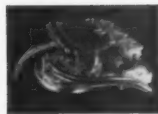
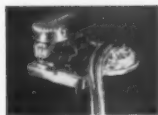
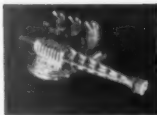
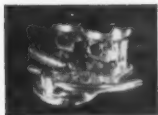
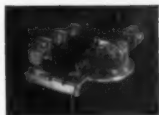
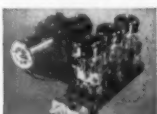
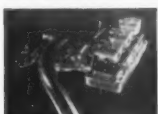
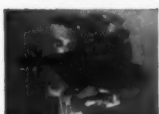
You can't judge a book by its cover, but you can gauge its net worth by what the reader obtains from its editorial content. And . . . 8 out of 10 MOTOR AGE readers find valuable tips, helpful ideas that so often prove to be profitable to them from the pages of their automotive service magazine.

65.7 per cent find them profit-producing.



SUPERCHARGERS

ELECTRIC • ENGINE • EXHAUST • TWO STROKE • PULSE-JET • SOLID PROPELLENT



FEATURES:

- ADAPTS TO ANY AND ALL CARS
- SIMPLIFIED INSTALLATION
- LOW SILHOUETTES FOR LOW HOODS
- USE YOUR STOCK CARBURETOR
- CARBURETOR NOT PRESSURIZED
- ASSEMBLED OR IN KITS
- COMPRESSOR BYPASS STANDARD
- OPERATE ONLY WHEN NEEDED
- DASH REGULATION OPTIONAL
- TRANSFERABLE, CAR TO CAR
- QUICK CHANGE MANIFOLD
- QUICK CHANGE COMP. HEAD

TYPICAL INSTALLATION



OBERHAUSEN ENGINEERING CORP.
2777 ASHFORD RD., N.E., ATLANTA 19, GEORGIA
☐ \$1.00 ENCL. RUSH 28 PAGE DELUXE FULL COLOR CATALOG
☐ \$5.00 ENCL. RUSH 150 PAGE INSTALLATION MANUAL PLUS DELUXE CATALOG

REFUNDED ON FIRST ORDER

CAR MAKE _____ YEAR _____ NO. CYL _____
NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

336 COMBINATIONS TO CHOOSE FROM

65% BOOST; 107 HP INCREASE
ON STOCK 283 cu. in. CHEVY, USING AN INEXPENSIVE MODEL

THE LAST



LAFF



Boss to Secretary: Congratulations, Miss Jones—This is the earliest you've been late.

Wife to husband: I wish you had the spunk the government has. They certainly don't let being in debt keep them from spending."

Fortune teller: "Prepare yourself—your husband is about to die a violent death."

Wife: "Will I be acquitted?"

First Steno: "How do you like your new boss?"

Second Steno: "Oh, he ain't so bad, only he's kinda bigoted."

What d'ya mean, bigoted?"

"He thinks words can be spelled only one way."



The hold-up man shoved a note at the bank teller which read: "I've got you covered—hand over all the dough in the cage."

The teller scribbled back: "Kindly go to the next window. I'm on my lunch hour."

A tourist stopped where a farmer was erecting a building. "What are you building?" he asked.

"Wal," answered the farmer, "if'n I can rent it, it's a rustic cottage, an' if'n I can't, it's a cow shed."

Neighbor: "Is your son hard to get out of bed in the morning?"

Student's mother: "No, I just open the door and throw the cat on his bed."

Neighbor: "How does that awaken him?"

Student's mother: "He sleeps with the dog!"

Customer: "I'd like to smother my wife with diamonds."

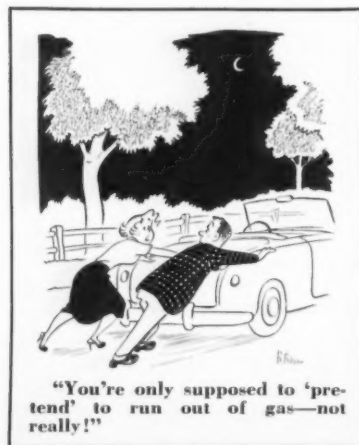
Salesman: "There must be a cheaper way, sir."

Teacher: "Johnny, tell me where elephants are found."

Johnny: "They're so big they hardly ever get lost."

Freshman: "May I kiss you?"

Co-ed: "Ye gods, another amateur."



NOW...One primer-surfacer for use under both DUCO and LUCITE

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New Du Pont **#70 DARK GRAY** and **#80 RED OXIDE**
join **#30 PLATINUM GRAY** to give top versatility



Here are the most versatile primer-surfacers available today. You can use all the new Du Pont Hi-Speed Primer-Surfacers under both super-topcoats—DUCO® Lacquer and LUCITE® Acrylic Lacquer. They eliminate the stocking of many extra primer-surfacers; they handle easily, perform perfectly under all conditions, are ideal as the undercoat for all of today's car colors.

The new Hi-Speed Primer-Surfacers are outstanding in color holdout . . . give the

base for uniformly beautiful gloss that cuts compounding time. In addition, they stay uniform after thinning to prevent pinholing . . . fill fast and dry fast . . . sand smooth without tearing and pulling.

So try these 3 Du Pont Hi-Speed Primer-Surfacers—the new #70 Dark Gray and #80 Red Oxide, and popular #30 Platinum Gray. They cost less at the gun than many so called “bargain” primer-surfacers. Available at all Du Pont jobbers.



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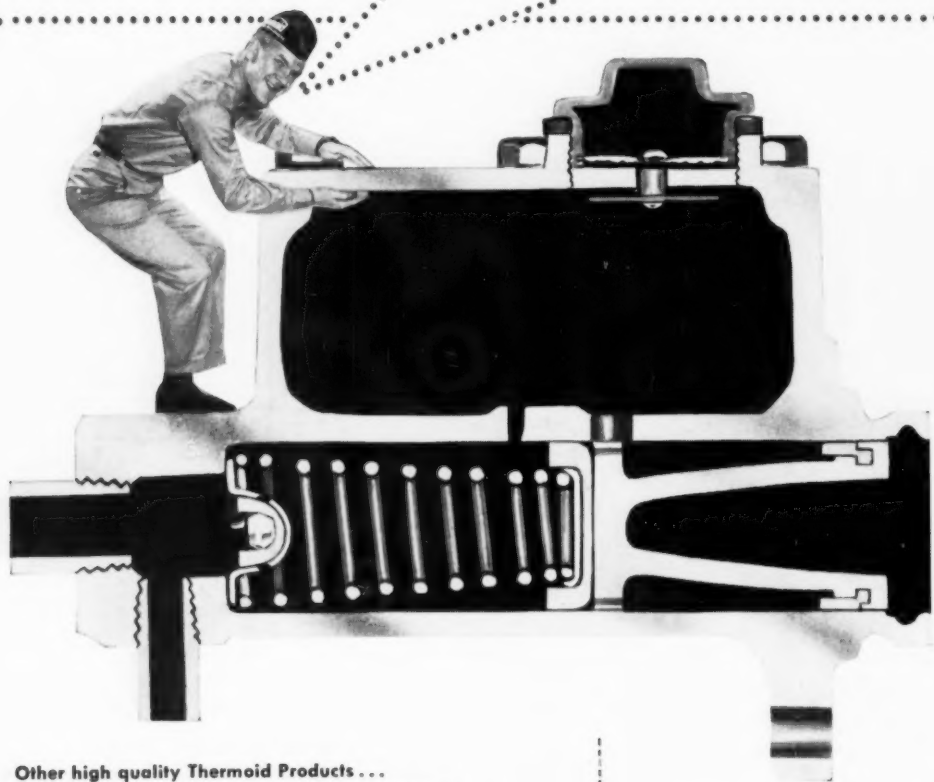
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